

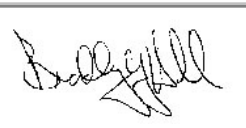
**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☒

<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 922-36H2AS		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6587		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> mary.mondragon@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> ML 22650		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	1829 FNL 1501 FEL	SWNE	36	9.0 S	22.0 E	S
<b>Top of Uppermost Producing Zone</b>	1360 FNL 700 FEL	SENE	36	9.0 S	22.0 E	S
<b>At Total Depth</b>	1360 FNL 700 FEL	SENE	36	9.0 S	22.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 700		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 203		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 370		<b>26. PROPOSED DEPTH</b> MD: 8801 TVD: 8600		
<b>27. ELEVATION - GROUND LEVEL</b> 4961		<b>28. BOND NUMBER</b> 22013542		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		

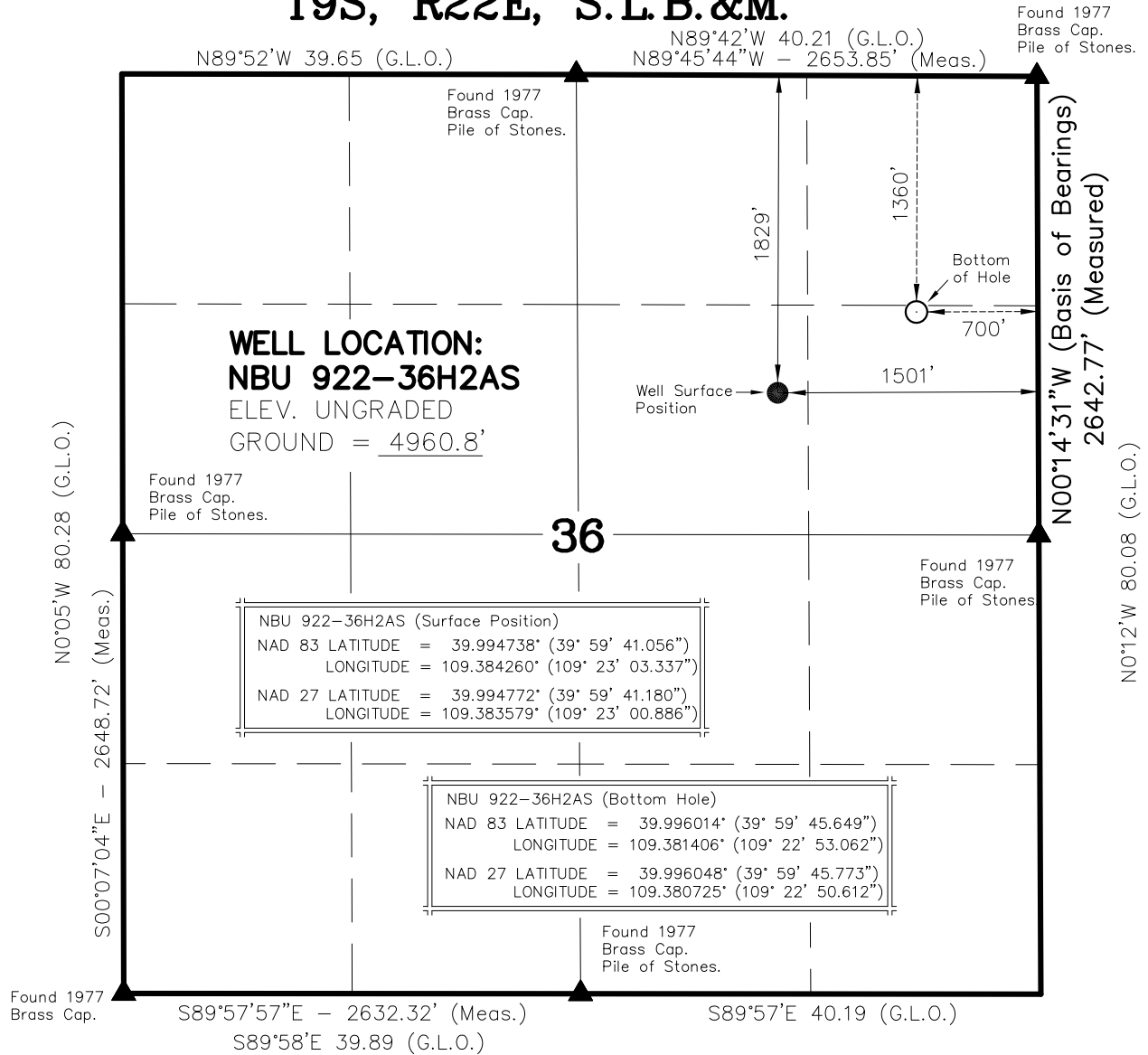
**ATTACHMENTS****VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES**

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP
<b>NAME</b> Kathy Schneebeck-Dulnoan	<b>TITLE</b> Staff Regulatory Analyst
<b>SIGNATURE</b>	<b>DATE</b> 05/03/2009
<b>PHONE</b> 720 929-6007	<b>EMAIL</b> Kathy.SchneebeckDulnoan@anadarko.com
<b>API NUMBER ASSIGNED</b> 43047503920000	<b>APPROVAL</b>  Permit Manager

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	8801		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	8801	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	2200		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	2200	36.0			

# T9S, R22E, S.L.B.&M.



## NOTES:

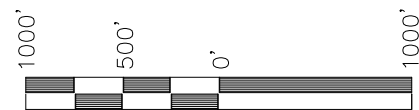
- ▲ = Section Corners Located
- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
- The Bottom of hole bears N59°46'57\"E 925.18' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW  $\frac{1}{4}$  of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

**Kerr-McGee**  
**Oil & Gas Onshore, LP**

1099 18th Street - Denver, Colorado 80202

**NBU 922-36H2AS**  
**WELL PLAT**  
**1360' FNL, 700' FEL (Bottom Hole)**  
**SE  $\frac{1}{4}$  NE  $\frac{1}{4}$  OF SECTION 36, T9S, R22E,**  
**S.L.B.&M. UTAH COUNTY, UTAH.**

CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182



SCALE

## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 362251  
STATE OF UTAH

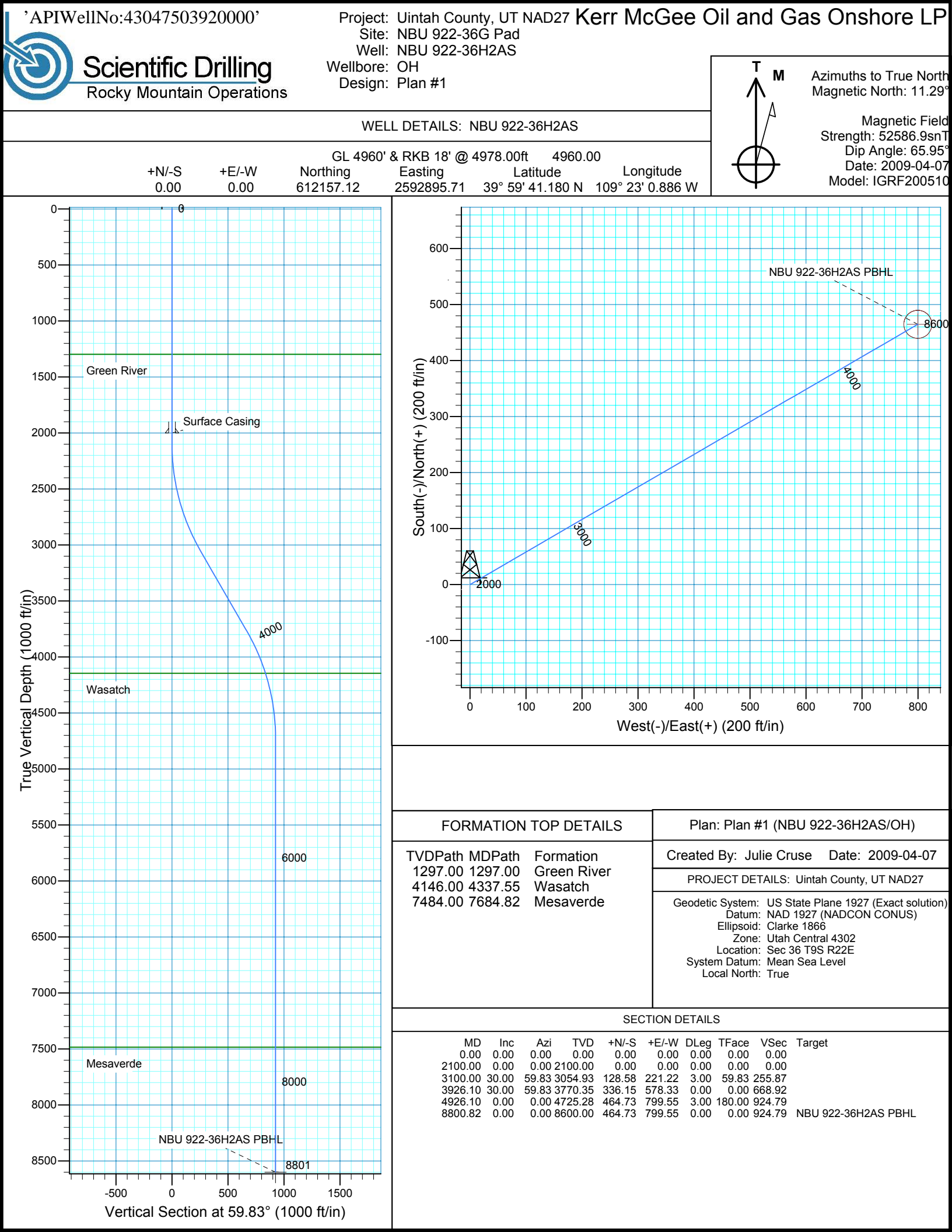
**TIMBERLINE**

ENGINEERING & LAND SURVEYING, INC.

209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365

DATE SURVEYED: 9-29-08	SURVEYED BY: M.S.B.	SHEET <b>3</b> OF 13
DATE DRAWN: 10-2-08	DRAWN BY: E.M.S.	
SCALE: 1" = 1000'	Date Last Revised: 02-03-09	





**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT NAD27  
NBU 922-36G Pad  
NBU 922-36H2AS  
OH**

**Plan: Plan #1**

## **Standard Planning Report**

**07 April, 2009**



## Scientific Drilling

### Planning Report

<b>Database:</b>	EDM 2003.16 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-36H2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Site:</b>	NBU 922-36G Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-36H2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Uintah County, UT NAD27		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Utah Central 4302		

Site		NBU 922-36G Pad, Sec 36 T9S R22E			
Site Position:		Northing:	612,190.71 ft	Latitude:	39° 59' 41.517 N
From:	Lat/Long	Easting:	2,592,873.97 ft	Longitude:	109° 23' 1.155 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.36 °

Well	NBU 922-36H2AS, 1829' FNL 1501' FEL					
Well Position	+N/-S	0.00 ft	Northing:	612,157.12 ft	Latitude:	39° 59' 41.180 N
	+E/-W	0.00 ft	Easting:	2,592,895.71 ft	Longitude:	109° 23' 0.886 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,960.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	2009-04-07	11.29	65.95	52,587

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	59.83	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	30.00	59.83	3,054.93	128.58	221.22	3.00	3.00	0.00	59.83	
3,926.10	30.00	59.83	3,770.35	336.15	578.33	0.00	0.00	0.00	0.00	
4,926.10	0.00	0.00	4,725.28	464.73	799.55	3.00	-3.00	0.00	180.00	
8,800.82	0.00	0.00	8,600.00	464.73	799.55	0.00	0.00	0.00	0.00	NBU 922-36H2AS PB



# Scientific Drilling

## Planning Report

<b>Database:</b>	EDM 2003.16 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-36H2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Site:</b>	NBU 922-36G Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-36H2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,297.00	0.00	0.00	1,297.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Green River</b>									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Surface Casing</b>									
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	3.00	59.83	2,199.95	1.32	2.26	2.62	3.00	3.00	0.00
2,300.00	6.00	59.83	2,299.63	5.26	9.05	10.46	3.00	3.00	0.00
2,400.00	9.00	59.83	2,398.77	11.82	20.33	23.51	3.00	3.00	0.00
2,500.00	12.00	59.83	2,497.08	20.97	36.08	41.74	3.00	3.00	0.00
2,600.00	15.00	59.83	2,594.31	32.70	56.26	65.08	3.00	3.00	0.00
2,700.00	18.00	59.83	2,690.18	46.97	80.82	93.48	3.00	3.00	0.00
2,800.00	21.00	59.83	2,784.43	63.75	109.67	126.85	3.00	3.00	0.00
2,900.00	24.00	59.83	2,876.81	82.97	142.75	165.12	3.00	3.00	0.00
3,000.00	27.00	59.83	2,967.06	104.61	179.97	208.16	3.00	3.00	0.00
3,100.00	30.00	59.83	3,054.93	128.58	221.22	255.87	3.00	3.00	0.00
3,200.00	30.00	59.83	3,141.53	153.71	264.45	305.87	0.00	0.00	0.00
3,300.00	30.00	59.83	3,228.13	178.83	307.68	355.87	0.00	0.00	0.00
3,400.00	30.00	59.83	3,314.74	203.96	350.90	405.87	0.00	0.00	0.00
3,500.00	30.00	59.83	3,401.34	229.09	394.13	455.87	0.00	0.00	0.00
3,600.00	30.00	59.83	3,487.94	254.21	437.36	505.87	0.00	0.00	0.00
3,700.00	30.00	59.83	3,574.54	279.34	480.59	555.87	0.00	0.00	0.00
3,800.00	30.00	59.83	3,661.15	304.46	523.82	605.87	0.00	0.00	0.00
3,900.00	30.00	59.83	3,747.75	329.59	567.04	655.87	0.00	0.00	0.00
3,926.10	30.00	59.83	3,770.35	336.15	578.33	668.92	0.00	0.00	0.00
4,000.00	27.78	59.83	3,835.05	354.09	609.19	704.63	3.00	-3.00	0.00
4,100.00	24.78	59.83	3,924.70	376.34	647.47	748.90	3.00	-3.00	0.00
4,200.00	21.78	59.83	4,016.55	396.20	681.64	788.42	3.00	-3.00	0.00
4,300.00	18.78	59.83	4,110.34	413.62	711.61	823.09	3.00	-3.00	0.00
4,337.55	17.66	59.83	4,146.00	419.52	721.76	834.82	3.00	-3.00	0.00
<b>Wasatch</b>									
4,400.00	15.78	59.83	4,205.81	428.54	737.29	852.79	3.00	-3.00	0.00
4,500.00	12.78	59.83	4,302.71	440.94	758.62	877.46	3.00	-3.00	0.00
4,600.00	9.78	59.83	4,400.77	450.77	775.53	897.02	3.00	-3.00	0.00



# Scientific Drilling

## Planning Report

<b>Database:</b>	EDM 2003.16 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-36H2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Site:</b>	NBU 922-36G Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-36H2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	6.78	59.83	4,499.71	458.01	787.99	911.43	3.00	-3.00	0.00
4,800.00	3.78	59.83	4,599.27	462.64	795.95	920.63	3.00	-3.00	0.00
4,900.00	0.78	59.83	4,699.18	464.64	799.39	924.62	3.00	-3.00	0.00
4,926.10	0.00	0.00	4,725.28	464.73	799.55	924.79	3.00	-3.00	0.00
5,000.00	0.00	0.00	4,799.18	464.73	799.55	924.79	0.00	0.00	0.00
5,100.00	0.00	0.00	4,899.18	464.73	799.55	924.79	0.00	0.00	0.00
5,200.00	0.00	0.00	4,999.18	464.73	799.55	924.79	0.00	0.00	0.00
5,300.00	0.00	0.00	5,099.18	464.73	799.55	924.79	0.00	0.00	0.00
5,400.00	0.00	0.00	5,199.18	464.73	799.55	924.79	0.00	0.00	0.00
5,500.00	0.00	0.00	5,299.18	464.73	799.55	924.79	0.00	0.00	0.00
5,600.00	0.00	0.00	5,399.18	464.73	799.55	924.79	0.00	0.00	0.00
5,700.00	0.00	0.00	5,499.18	464.73	799.55	924.79	0.00	0.00	0.00
5,800.00	0.00	0.00	5,599.18	464.73	799.55	924.79	0.00	0.00	0.00
5,900.00	0.00	0.00	5,699.18	464.73	799.55	924.79	0.00	0.00	0.00
6,000.00	0.00	0.00	5,799.18	464.73	799.55	924.79	0.00	0.00	0.00
6,100.00	0.00	0.00	5,899.18	464.73	799.55	924.79	0.00	0.00	0.00
6,200.00	0.00	0.00	5,999.18	464.73	799.55	924.79	0.00	0.00	0.00
6,300.00	0.00	0.00	6,099.18	464.73	799.55	924.79	0.00	0.00	0.00
6,400.00	0.00	0.00	6,199.18	464.73	799.55	924.79	0.00	0.00	0.00
6,500.00	0.00	0.00	6,299.18	464.73	799.55	924.79	0.00	0.00	0.00
6,600.00	0.00	0.00	6,399.18	464.73	799.55	924.79	0.00	0.00	0.00
6,700.00	0.00	0.00	6,499.18	464.73	799.55	924.79	0.00	0.00	0.00
6,800.00	0.00	0.00	6,599.18	464.73	799.55	924.79	0.00	0.00	0.00
6,900.00	0.00	0.00	6,699.18	464.73	799.55	924.79	0.00	0.00	0.00
7,000.00	0.00	0.00	6,799.18	464.73	799.55	924.79	0.00	0.00	0.00
7,100.00	0.00	0.00	6,899.18	464.73	799.55	924.79	0.00	0.00	0.00
7,200.00	0.00	0.00	6,999.18	464.73	799.55	924.79	0.00	0.00	0.00
7,300.00	0.00	0.00	7,099.18	464.73	799.55	924.79	0.00	0.00	0.00
7,400.00	0.00	0.00	7,199.18	464.73	799.55	924.79	0.00	0.00	0.00
7,500.00	0.00	0.00	7,299.18	464.73	799.55	924.79	0.00	0.00	0.00
7,600.00	0.00	0.00	7,399.18	464.73	799.55	924.79	0.00	0.00	0.00
7,684.82	0.00	0.00	7,484.00	464.73	799.55	924.79	0.00	0.00	0.00
<b>Mesaverde</b>									
7,700.00	0.00	0.00	7,499.18	464.73	799.55	924.79	0.00	0.00	0.00
7,800.00	0.00	0.00	7,599.18	464.73	799.55	924.79	0.00	0.00	0.00
7,900.00	0.00	0.00	7,699.18	464.73	799.55	924.79	0.00	0.00	0.00
8,000.00	0.00	0.00	7,799.18	464.73	799.55	924.79	0.00	0.00	0.00
8,100.00	0.00	0.00	7,899.18	464.73	799.55	924.79	0.00	0.00	0.00
8,200.00	0.00	0.00	7,999.18	464.73	799.55	924.79	0.00	0.00	0.00
8,300.00	0.00	0.00	8,099.18	464.73	799.55	924.79	0.00	0.00	0.00
8,400.00	0.00	0.00	8,199.18	464.73	799.55	924.79	0.00	0.00	0.00
8,500.00	0.00	0.00	8,299.18	464.73	799.55	924.79	0.00	0.00	0.00
8,600.00	0.00	0.00	8,399.18	464.73	799.55	924.79	0.00	0.00	0.00
8,700.00	0.00	0.00	8,499.18	464.73	799.55	924.79	0.00	0.00	0.00
8,800.00	0.00	0.00	8,599.18	464.73	799.55	924.79	0.00	0.00	0.00
8,800.82	0.00	0.00	8,600.00	464.73	799.55	924.79	0.00	0.00	0.00



## Scientific Drilling

### Planning Report

<b>Database:</b>	EDM 2003.16 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well NBU 922-36H2AS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Project:</b>	Uintah County, UT NAD27	<b>MD Reference:</b>	GL 4960' & RKB 18' @ 4978.00ft
<b>Site:</b>	NBU 922-36G Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 922-36H2AS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
NBU 922-36H2AS PBHL	0.00	0.00	8,600.00	464.73	799.55	612,640.63	2,593,684.03	39° 59' 45.773 N	109° 22' 50.612 W
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
	Measured Depth (ft)	Vertical Depth (ft)		Casing Diameter (in)	Hole Diameter (in)
			Name		
	2,000.00	2,000.00	Surface Casing	9.625	13.500

Formations					
	Measured Depth	Vertical Depth			
	(ft)	(ft)	Name	Lithology	Dip
					(°)
					Dip Direction
					(°)
	1,297.00	1,297.00	Green River		0.00
	4,337.55	4,146.00	Wasatch		0.00
	7,684.82	7,484.00	Mesaverde		0.00

**NBU 922-36H2AS**

Pad: NBU 922-36G

Surface: 1,829' FNL, 1,501' FEL (SW/4NE/4)

BHL: 1,360' FNL 700' FEL (SE/4NE/4)

Sec. 36 T9S R22E

Uintah, Utah

Mineral Lease: ML22650

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,297'	
Birds Nest	1,472'	Water
Mahogany	1,986'	Water
Wasatch	4,146'	Gas
Mesaverde	6,484'	Gas
MVU2	7,484'	Gas
MVL1	8,040'	Gas
TVD	8,600'	
TD	8,801'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 8,801' TD, approximately equals 5,392 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,377 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

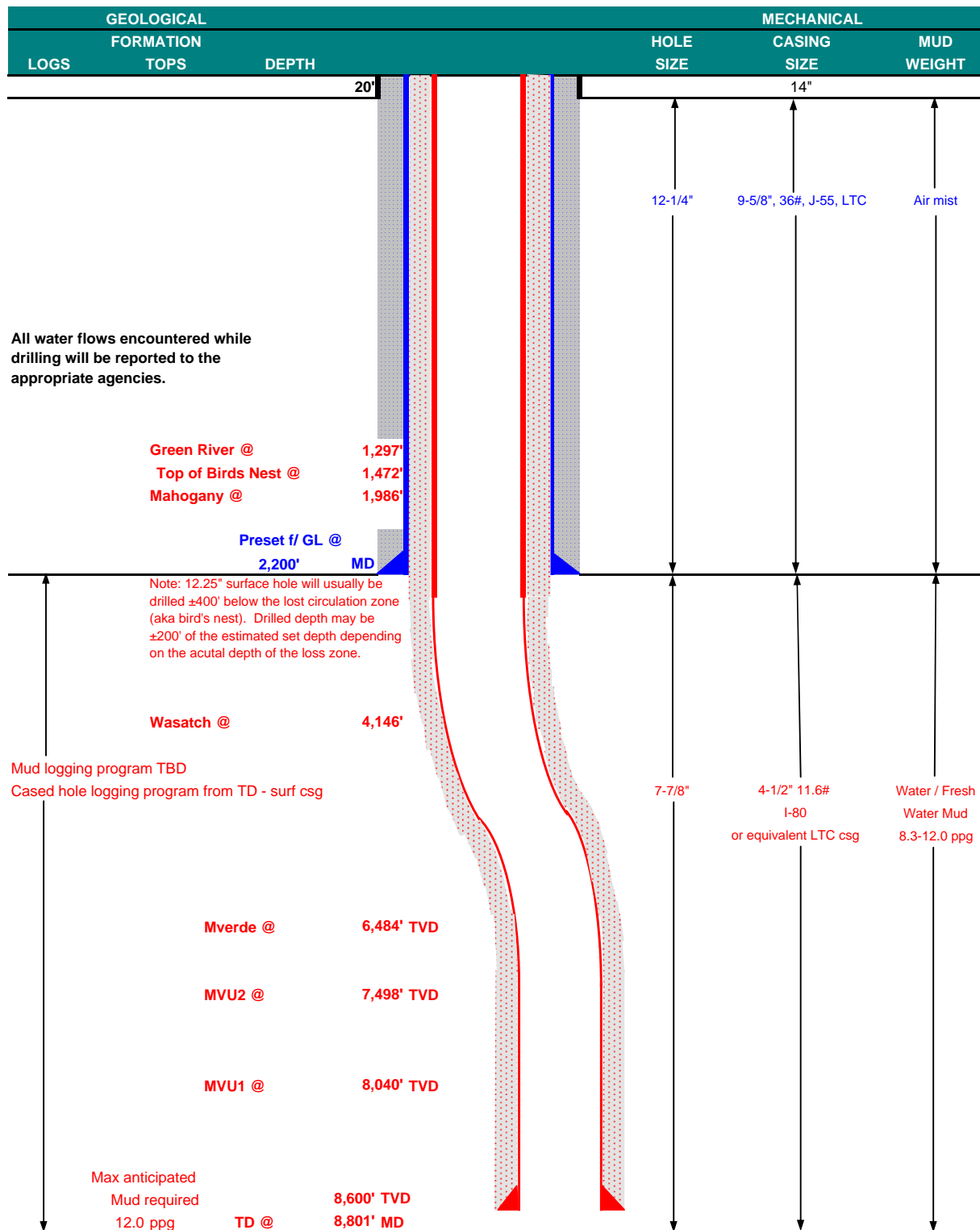
**10. Other Information:**

*Please refer to the attached Drilling Program.*



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	June 11, 2009		
WELL NAME	NBU 921-36H2AS					TD	8,600'	TVD	8,801' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	ELEVATION	4,961' GL	KB 4,976'
SURFACE LOCATION	SW/4 NE/4	1,829' FNL	1,501' FEL	Sec 36	T 9S	R 22E			
	Latitude:	39.994772	Longitude:	-109.383579		NAD 27			
BTM HOLE LOCATION	SE/4 NE/4	1,360' FNL	700' FEL	Sec 36	T 9S	R 22E			
	Latitude:	39.996048	Longitude:	-109.380725		NAD 27			
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: SITLA (Minerals), UDOGM (Surface), Tri-County Health Dept.								





## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'				3,520	2,020	453,000
SURFACE	9-5/8"	0 to 2,200	36.00	J-55	LTC	0.99	1.96	7.28
						7,780	6,350	201,000
PRODUCTION	4-1/2"	0 to 8,801	11.60	I-80	LTC	2.24	1.18	2.26

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 3,377 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg)

0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 5,392 psi**

### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	215	60%	15.60	1.18
Option 1							
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele Premium cmt + 2% CaCl	380	0%	15.60	1.18
SURFACE			<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>				
Option 2	LEAD	1,700'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	400	35%	12.60	1.81
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,641'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	350	40%	11.00	3.38
	TAIL	5,160'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,260	40%	14.30	1.31

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

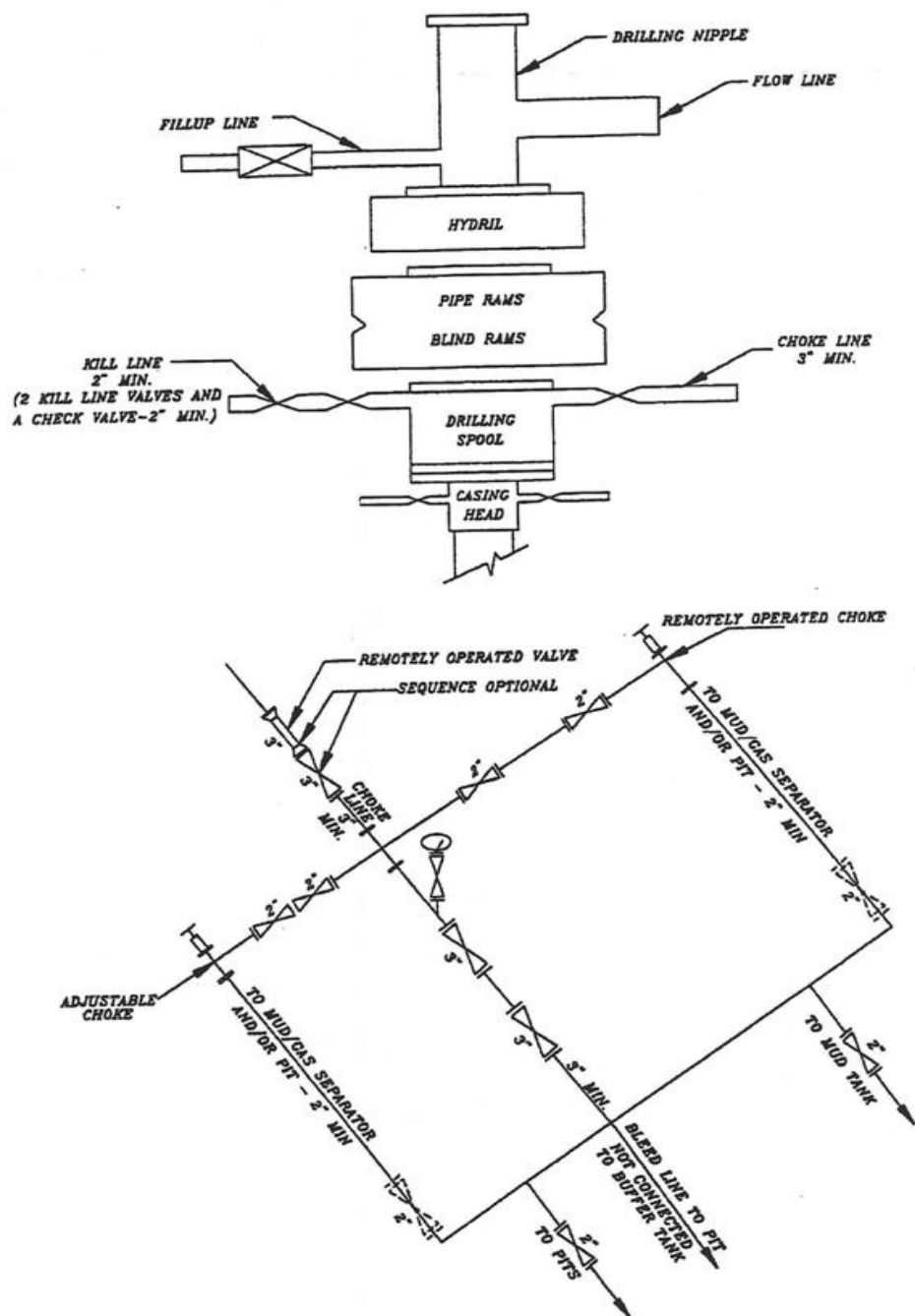
DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

# EXHIBIT A NBU 921-36H2AS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

# WELL PAD INTERFERENCE PLAT

## DIRECTIONAL PAD – NBU 318–36E

BASIS OF BEARINGS IS THE EAST LINE OF THE NE 1/4 OF SECTION 36, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°14'31"W.



### BOTTOM HOLE FOOTAGES

NBU 922–36A4BS  
980' FNL & 630' FEL

NBU 922–36H2AS  
1360' FNL & 700' FEL

NBU 922–36H2DS  
1720' FNL & 795' FEL

RELATIVE COORDINATES From Surface Position to Bottom Hole		
WELL	NORTH	EAST
922–36A4BS	811'	889'
922–36H2AS	466'	799'
922–36H2DS	123'	696'

LATITUDE & LONGITUDE Bottom Hole – (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
922–36A4BS	39°59'49.400" 39.997055°	109°22'52.179" 109.381161°
922–36H2AS	39°59'45.649" 39.996014°	109°22'53.062" 109.381406°
922–36H2DS	39°59'42.097" 39.995027°	109°22'54.267" 109.381741°

LATITUDE & LONGITUDE Bottom Hole – (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
922–36A4BS	39°59'49.524" 39.997090°	109°22'49.728" 109.380480°
922–36H2AS	39°59'45.773" 39.996048°	109°22'50.612" 109.380725°
922–36H2DS	39°59'42.221" 39.995061°	109°22'51.816" 109.381060°

**NBU 922–36A4BS**  
Az. to D.H.M. = 151.86250° 86.7'

**NBU 922–36G1T**  
Az. to D.H.M. = 152.88611° 66.8'

**NBU 922–36H2AS**  
Az. to D.H.M. = 154.82194° 46.8'

**NBU 922–36H2DS**  
Az. to D.H.M. = 159.59028° 27.1'

**EXISTING E.O.G. DRY HOLE MARKER NBU 318–36E**  
(Well bore buried, position determined with metal detector)

### SURFACE POSITION FOOTAGES:

NBU 922–36A4BS  
1795' FNL & 1522' FEL

NBU 922–36G1T  
1812' FNL & 1512' FEL

NBU 922–36H2AS  
1829' FNL & 1501' FEL

NBU 922–36H2DS  
1846' FNL & 1491' FEL

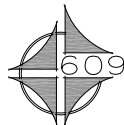
NBU 318–36E (Dry Hole Marker)  
1871' FNL & 1482' FEL

LATITUDE & LONGITUDE Surface Position – (NAD 83)		
WELL	N. LATITUDE	W. LONGITUDE
922–36A4BS	39°59'41.393" 39.994831°	109°23'03.606" 109.384335°
922–36G1T	39°59'41.225" 39.994785°	109°23'03.472" 109.384298°
922–36H2AS	39°59'41.056" 39.994738°	109°23'03.337" 109.384260°
922–36H2DS	39°59'40.888" 39.994691°	109°23'03.203" 109.384223°
Existing Well NBU 318–36E	39°59'40.637" 39.994621°	109°23'03.082" 109.384189°

LATITUDE & LONGITUDE Surface Position – (NAD 27)		
WELL	N. LATITUDE	W. LONGITUDE
922–36A4BS	39°59'41.517" 39.994866°	109°23'01.155" 109.383654°
922–36G1T	39°59'41.349" 39.994819°	109°23'01.021" 109.383617°
922–36H2AS	39°59'41.180" 39.994772°	109°23'00.886" 109.383579°
922–36H2DS	39°59'41.012" 39.994725°	109°23'00.752" 109.383542°
Existing Well NBU 318–36E	39°59'40.761" 39.994656°	109°23'00.631" 109.383509°

**Kerr–McGee**  
**Oil & Gas Onshore, LP**  
1099 18th Street – Denver, Colorado 80202

NBU 922–36A4BS, NBU 922–36G1T,  
NBU 922–36H2AS & NBU 922–36H2DS  
LOCATED IN SECTION 36, T9S, R22E,  
S.L.B.&M. UTAH COUNTY, UTAH.



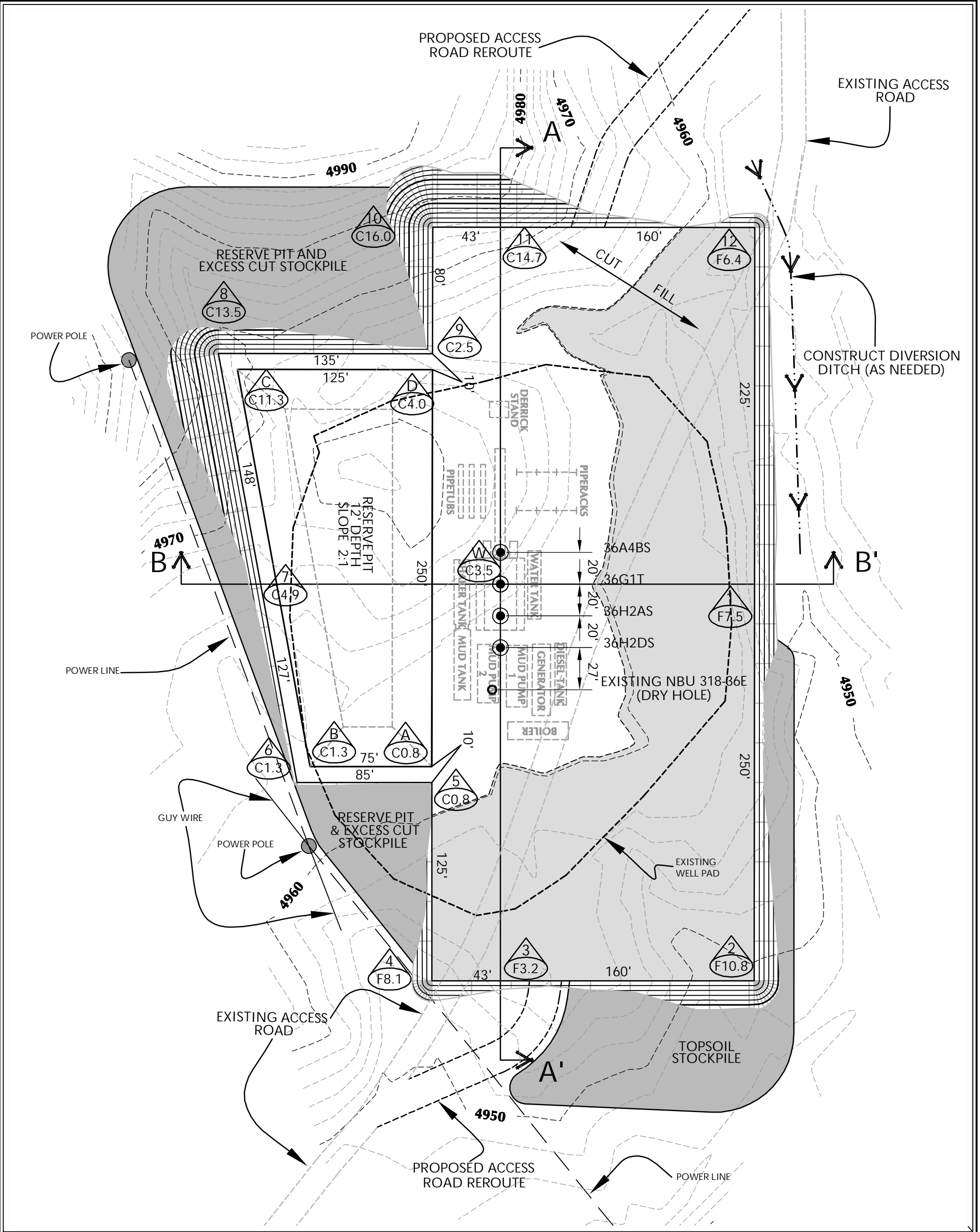
CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

DATE SURVEYED: 09-29-08	SURVEYED BY: M.S.B.
DATE DRAWN: 10-02-08	DRAWN BY: E.M.S.
	REVISED: 02-04-08

**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET  
**5**  
OF 13





WELL PAD NBU 318-36E QUANTITIES

EXISTING GRADE @ CENTER OF WELL PAD = 4,963.6'  
FINISHED GRADE ELEVATION = 4,960.1'  
CUT SLOPES = 1.5:1  
FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 12,115 C.Y.  
TOTAL FILL FOR WELL PAD = 9,224 C.Y.  
TOPSOIL @ 6" DEPTH = 2,693 C.Y.  
EXCESS MATERIAL = 2,891 C.Y.  
TOTAL DISTURBANCE = 3.34 ACRES  
SHRINKAGE FACTOR = 1.10  
SWELL FACTOR = 1.00  
RESERVE PIT CAPACITY (2' OF FREEBOARD)  
+/- 28,590 BARRELS  
RESERVE PIT VOLUME  
+/- 7,690 CY

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)



HORIZONTAL 0 30 60 1" = 60'  
2' CONTOURS

KERR-MCGEE OIL & GAS  
ONSHORE L.P.  
1099 18th Street - Denver, Colorado 80202

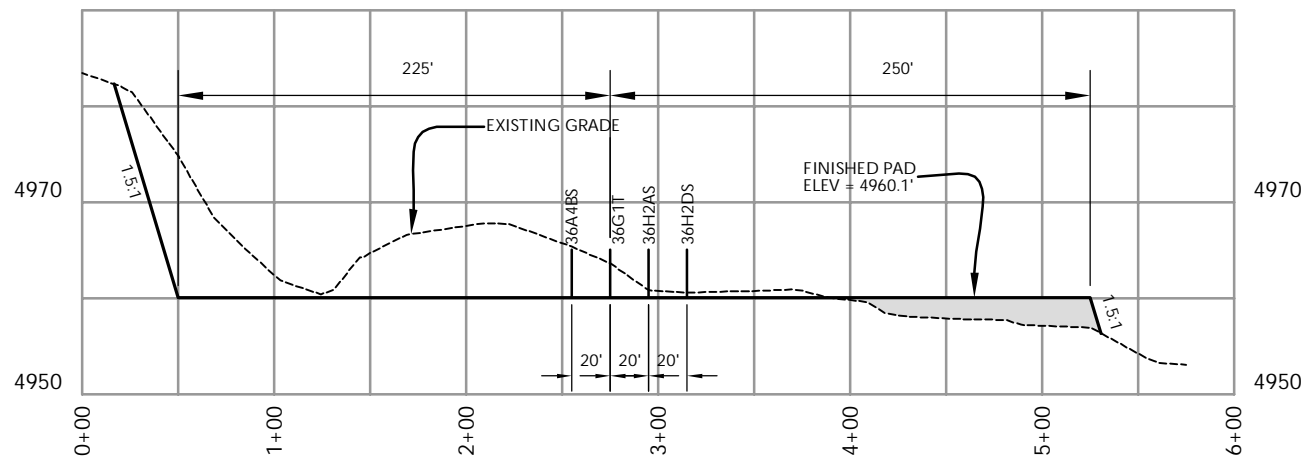


CONSULTING, LLC  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

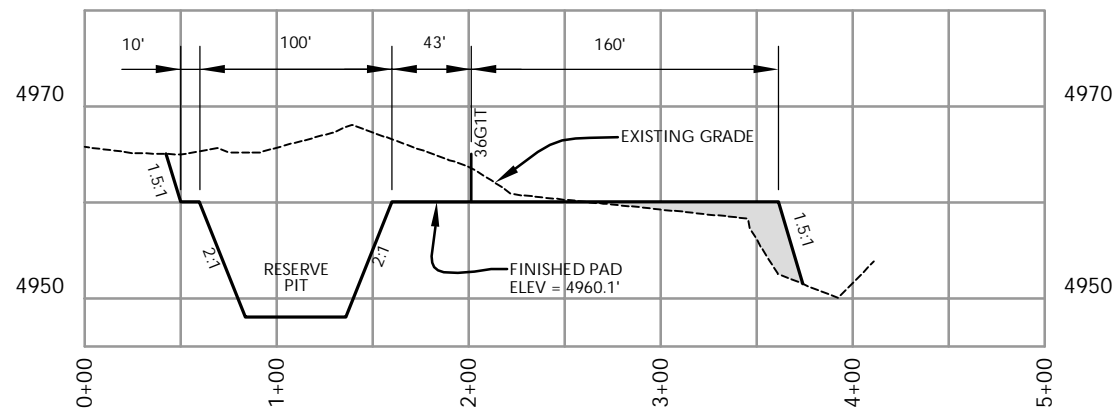
Scale: 1"=60'	Date: 2/25/09	SHEET NO: <b>6</b> 6 OF 13
REVISED:		

**Timberline** (435) 789-1365  
Engineering & Land Surveying, Inc.  
38 WEST 100 NORTH VERNAL, UTAH 84078

WELL PAD - LOCATION LAYOUT  
NBU 922-36A4BS, NBU 922-36G1T,  
NBU 922-36H2AS & NBU 922-36H2DS  
LOCATED IN SECTION 36, T.9S., R.22E.  
S.L.B.&M., UINTAH COUNTY, UTAH



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT DEPTH.

**KERR-MCGEE OIL & GAS  
ONSHORE L.P.**

1099 18th Street - Denver, Colorado 80202

**WELL PAD - CROSS SECTIONS**  
NBU 922-36A4BS, NBU 922-36G1T,  
NBU 922-36H2AS & NBU 922-36H2DS  
LOCATED IN SECTION 36, T.9S., R.22E.  
S.L.B.&M., UINTAH COUNTY, UTAH



**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

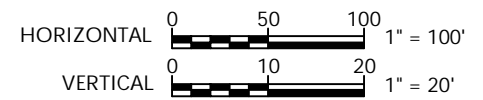
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Date: 2/25/09

SHEET NO:

**7**

7 OF 13



**Timberline** (435) 789-1365  
**Engineering & Land Surveying, Inc.**  
38 WEST 100 NORTH VERNAL, UTAH 84078

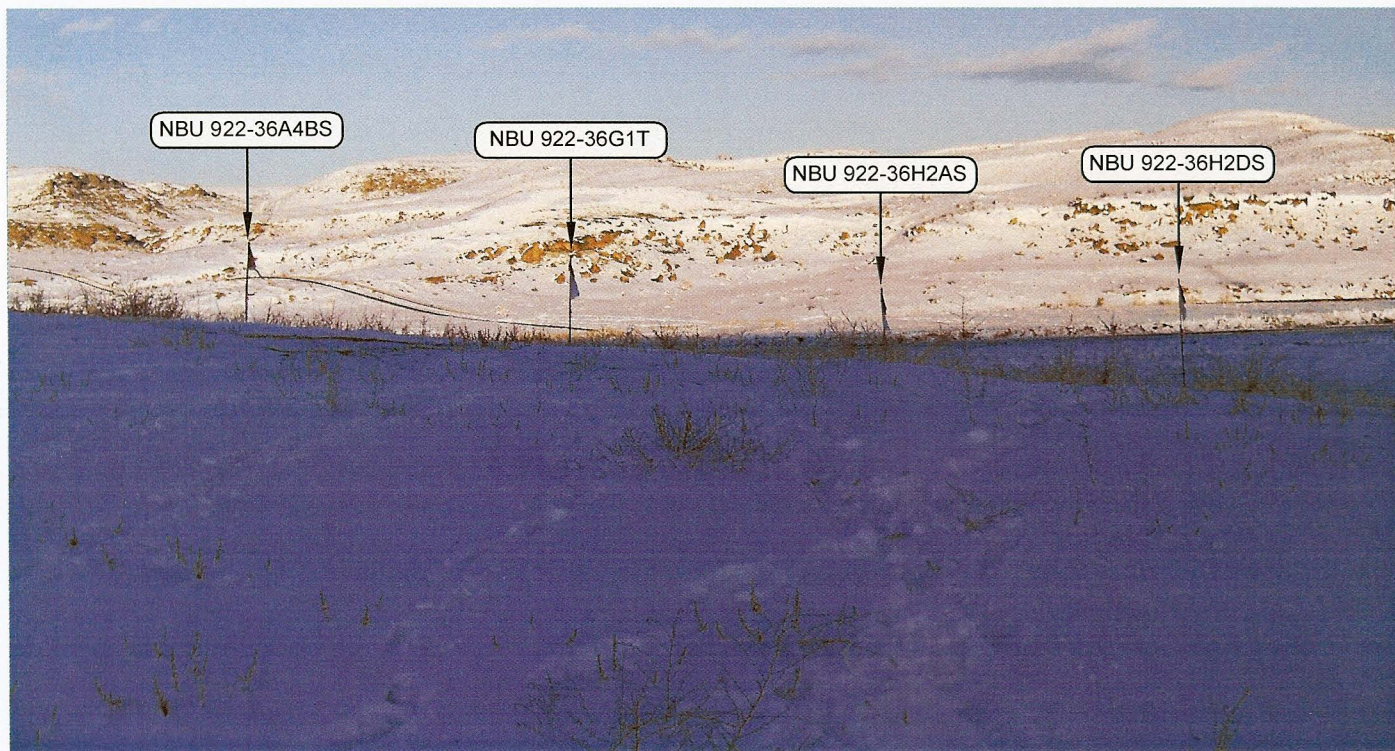


PHOTO VIEW: FROM CORNER 7 TO LOCATION STAKES

CAMERA ANGLE: NORTHEASTERLY

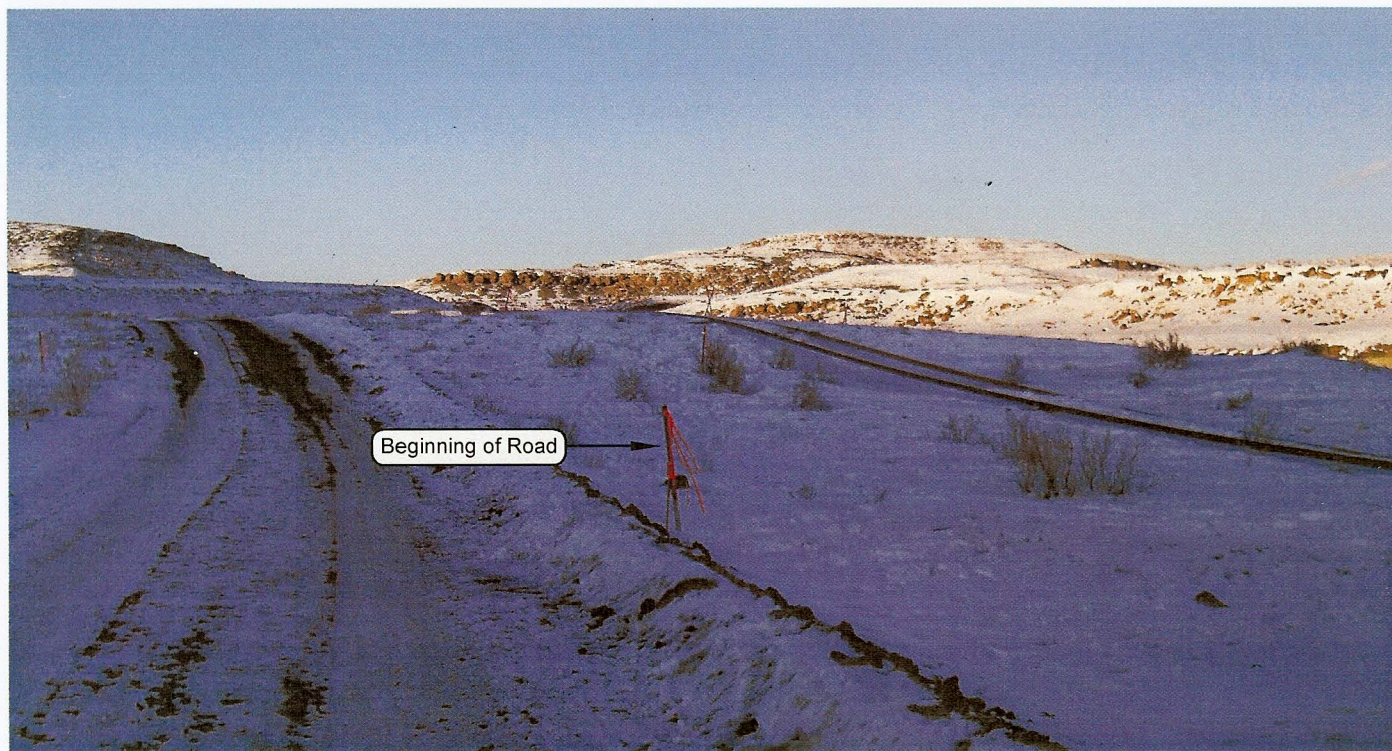


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHWESTERLY

**Kerr-McGee**  
**Oil & Gas Onshore, LP**  
 1099 18th Street — Denver, Colorado 80202



CONSULTING, LLC  
 371 Coffeen Avenue  
 Sheridan WY 82801  
 Phone 307-674-0609  
 Fax 307-674-0182

NBU 922-36A4BS, NBU 922-36G1T,  
 NBU 922-36H2AS & NBU 922-36H2DS  
 LOCATED IN SECTION 36, T9S, R22E,  
 S.L.B.&M. UINTAH COUNTY, UTAH.

**LOCATION PHOTOS**

TAKEN BY: M.S.B.

DRAWN BY: E.M.S.

DATE TAKEN: 09-29-08

DATE DRAWN: 10-02-08

REVISED: 02-04-09

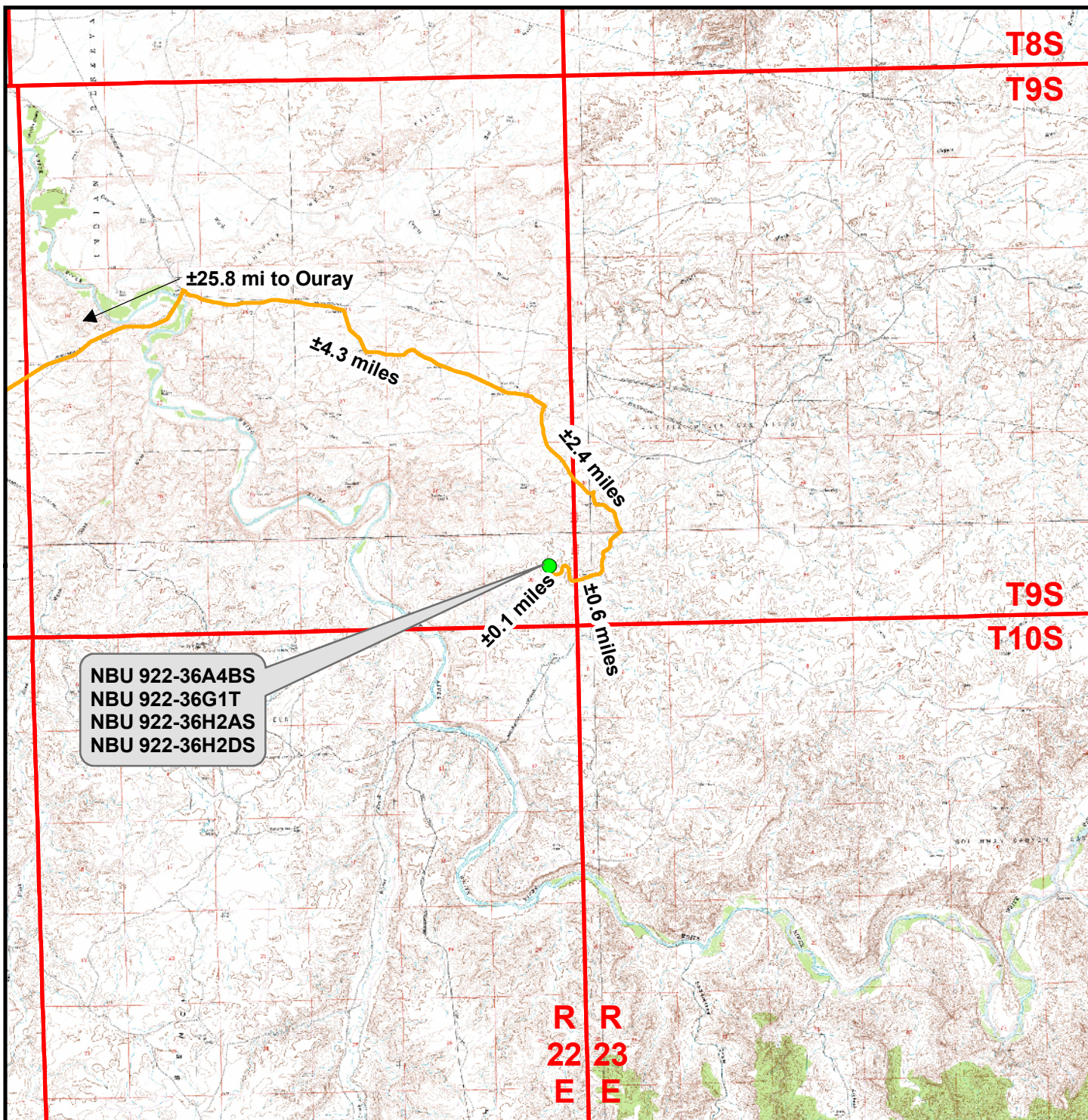
**Timberline**

(435) 789-1365

Engineering & Land Surveying, Inc.

209 NORTH 300 WEST VERNAL, UTAH 84078

**SHEET**  
**8**  
**OF 13**



### Legend

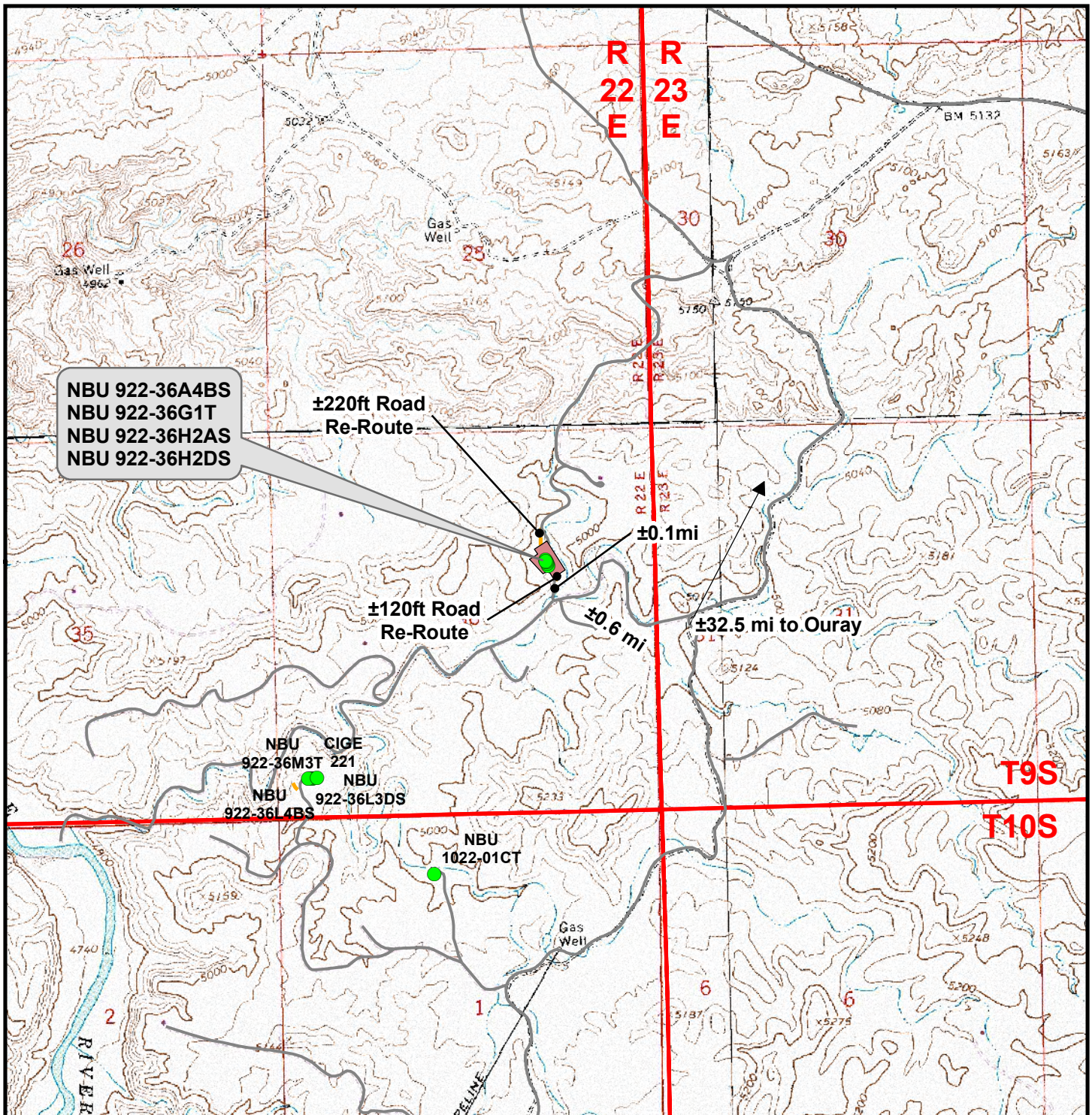
- Proposed Well Location
- Access Route - Proposed

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**NBU 922-36A4BS, NBU 922-36G1T,  
NBU 922-36H2AS & NBU 922-36H2DS**  
**Topo A**  
**Located In Section 36, T9S, R22E**  
**S.L.B.&M., Uintah County, Utah**



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: JELO	Date: 24 Feb 2009	<b>9</b>
Revised:	Date:	9 of 13



### Legend

- Well - Proposed
- Well Pad
- Road - Proposed
- Road - Existing

Total Proposed Road Length: ±340ft

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1099 18th Street, Denver, Colorado 80202

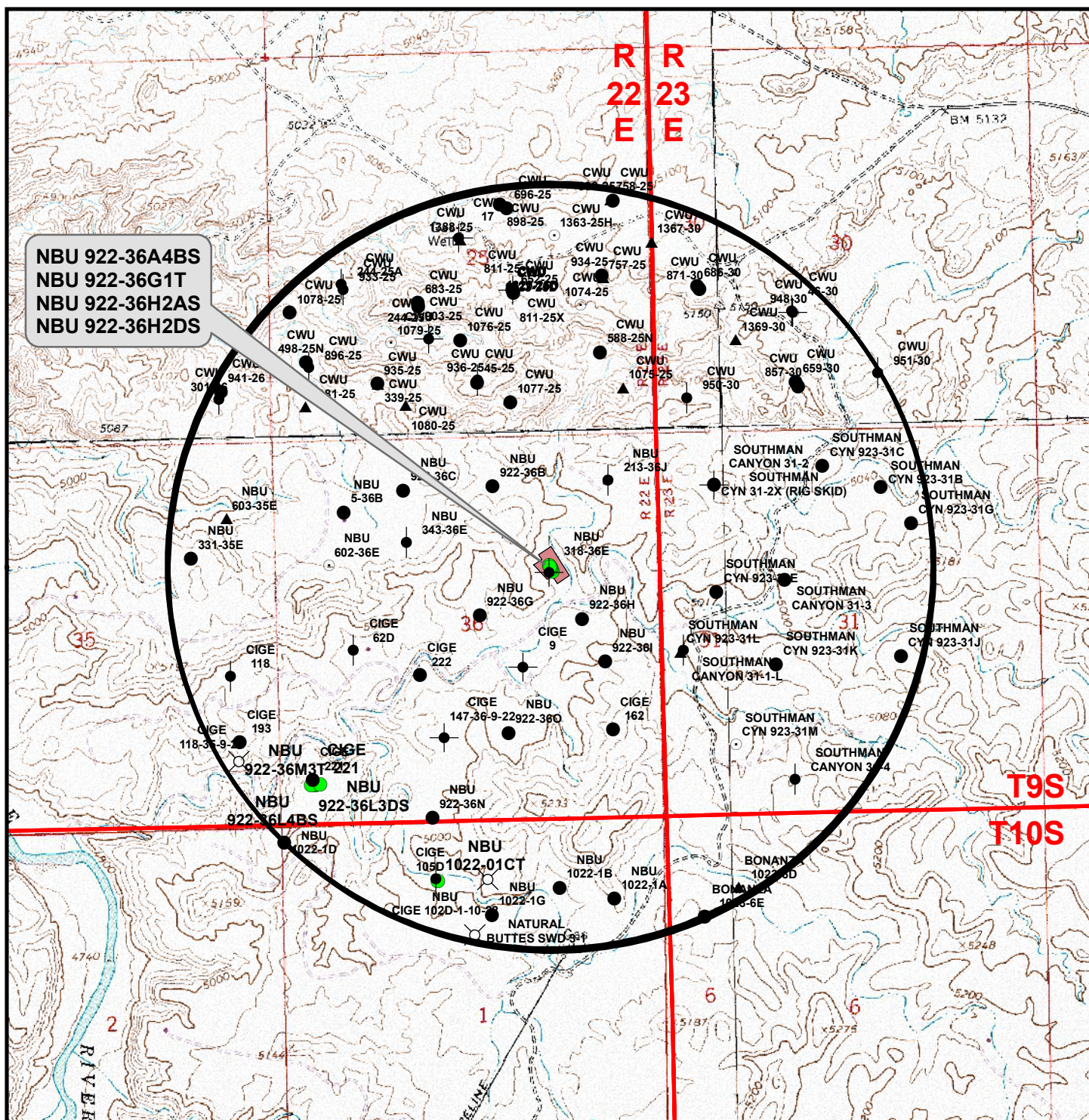
**NBU 922-36A4BS, NBU 922-36G1T,  
NBU 922-36H2AS & NBU 922-36H2DS**  
**Topo B**  
**Located In Section 36, T9S, R22E**  
**S.L.B.&M., Uintah County, Utah**

**609**  
**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2000ft	NAD83 USP Central
Drawn: JELO	Date: 24 Feb 2009
Revised:	Date:

Sheet No:  
**10** 10 of 13



### Legend

- |  |   |   |  |  |
|--|---|---|--|--|
| <span style="color: green;">●</span> Well - Proposed   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Well - 1 Mile Radius | <span style="color: black;">●</span> Producing                                      | <span style="color: black;">✕</span> Location Abandoned    | <span style="color: black;">●</span> Shut-In |
| <span style="background-color: #d3d3d3; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Well Pad |   | <span style="color: black;">▲</span> Approved permit (APD); not yet spudded         | <span style="color: black;">●</span> Temporarily-Abandoned |  |
|  |   | <span style="color: black;">○</span> Spudded (Drilling commenced: Not yet complete) | <span style="color: black;">●</span> Plugged and Abandoned |  |

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1099 18th Street, Denver, Colorado 80202

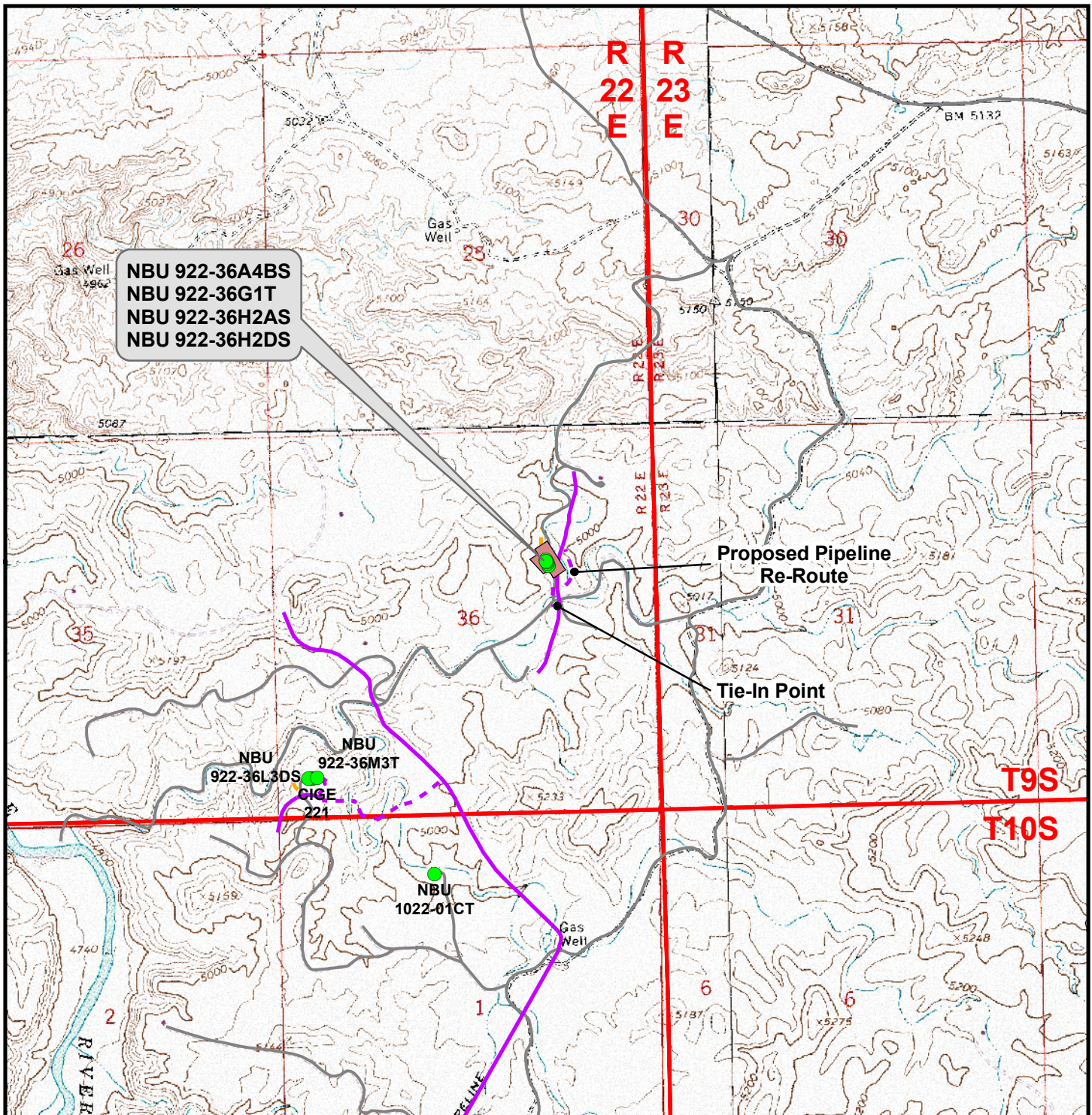
**NBU 922-36A4BS, NBU 922-36G1T,  
NBU 922-36H2AS & NBU 922-36H2DS**  
**Topo C**  
**Located In Section 36, T9S, R22E**  
**S.L.B.&M., Uintah County, Utah**

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Sheridan, WY 82801  
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Scale: 1" = 2000ft  
NAD83 USP Central  
Drawn: JELO  
Revised:

Sheet No:  
**11** 11 of 13  
Date: 24 Feb 2009  
Date:



# Legend

- Well - Proposed
- Well Pad
- Road - Proposed
- Pipeline - Proposed
- Road - Existing
- Pipeline - Existing

Proposed Pipeline Length From Tie-In Point To Edge Of Pad:  $\pm 1,020\text{ft}$   
 Proposed Pipeline Length Around Pad:  $\pm 660\text{ft}$

Kerr-McGee Oil & Gas Onshore, LP  
 1099 18th Street, Denver, Colorado 80202

NBU 922-36A4BS, NBU 922-36G1T,  
 NBU 922-36H2AS & NBU 922-36H2DS  
 Topo D  
 Located In Section 36, T9S, R22E  
 S.L.B.&M., Uintah County, Utah

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 Sheridan, WY 82801  
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Scale: 1" = 2000ft  
 NAD83 USP Central  
 Drawn: JELO  
 Revised: Date: 24 Feb 2009

Sheet No:  
**12** 12 of 13

**Kerr-McGee Oil & Gas Onshore, LP**  
**NBU 922-36A4BS, NBU 922-36G1T, NBU 922-36H2AS & NBU 922-36H2DS**  
**Section 36, T9S, R22E, S.L.B.&M.**

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 14.6 MILES TO THE INTERSECTION OF THE CHAPETA WELLS ROAD (COUNTY B ROAD 3410) WHICH ROAD INTERSECTION IS APPROXIMATELY 400 FEET NORTHEAST OF THE MOUNTAIN FUEL BRIDGE, AT THE WHITE RIVER. EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 4.3 MILES ALONG THE CHAPETA WELLS ROAD TO THE INTERSECTION OF THE ATCHEE WASH ROAD (COUNTY B ROAD 4240). EXIT RIGHT AND PROCEED IN A SOUTHEASTERLY, THEN SOUTHERLY DIRECTION ALONG THE ATCHEE WASH ROAD APPROXIMATELY 2.4 MILES TO AN EXISTING SERVICE ROAD TO THE WEST. EXIT RIGHT AND PROCEED IN A WESTERLY, THEN NORTHERLY, THEN SOUTHWESTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.6 MILES TO THE EXISTING ACCESS ROAD. EXIT RIGHT AND PROCEED IN A NORTHERLY DIRECTION ALONG THE ACCESS ROAD APPROXIMATELY 0.1 MILES TO NBU 318-36E WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 63.9 MILES IN A SOUTHERLY DIRECTION.

***Kerr-McGee Oil & Gas Onshore LP***

**NBU 922-36A4BS**

Surface: 1,795' FNL, 1,522' FEL (SW/4NE/4)  
BHL: 980' FNL 630' FEL (NE/4NE/4)

**NBU 922-36G1T**

Surface: 1,812' FNL, 1,512' FEL (SW/4NE/4)

**NBU 922-36H2AS**

Surface: 1,829' FNL, 1,501' FEL (SW/4NE/4)  
BHL: 1,360' FNL 700' FEL (SE/4NE/4)

**NBU 922-36H2DS**

Surface: 1,846' FNL, 1,491' FEL (SW/4NE/4)  
BHL: 1,720' FNL 795' FEL (SE/4NE/4)

Section 36 Township 9 South Range 22 East

Pad: NBU 922-36G

Uintah, Utah

Minerals: State – ML22650

Surface: State

**ONSHORE ORDER NO. 1**

***MULTI-POINT SURFACE USE & OPERATIONS PLAN***

**Directional Drilling:**

In accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

**1. Existing Roads:**

Refer to Topo Map A for directions to the location.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 922-36A4BS/ 36G1T/ 36H2AS/ 36H2DS

Page 2  
Surface Use and Operations Plan

**2. Planned Access Roads:**

Approximately  $\pm 0.0$  mi. of new access road is proposed. Please refer to the attached Topo Map B.

The upgraded and new portions of the access road will be crowned and ditched with a running surface of 18 feet and a maximum disturbed width of 30 feet. Appropriate water control will be installed to control erosion.

*Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site.*

The access road was centerline flagged during time of staking.

Surfacing material may be necessary, depending upon weather conditions.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

**3. Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

**4. Location of Existing & Proposed Facilities:**

*The following guidelines will apply if the well is productive.*

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The required color is Shadow Gray, a non-reflective earthtone.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 922-36A4BS/ 36G1T/ 36H2AS/ 36H2DS

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Surface Use and Operations Plan

**5. Location and Type of Water Supply:**

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**6. Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

**7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner and felt will be used; it will be a minimum of 20 mil thick, with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit. Any spills of oil, gas, salt water, or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 922-36A4BS/ 36G1T/ 36H2AS/ 36H2DS

Page 4  
Surface Use and Operations Plan

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

Any produced water from the proposed well will be contained in a water tank and will then be hauled By truck to one of the pre-approved disposal sites: RNI in Sec. 5 T9S R22E, NBU #159 in Sec. 35 T9S R21E, Ace Oilfield in Sec. 2 T6S R20E, MC&MC in Sec. 12 T6S R19E, Pipeline Facility in Sec. 36 T9S R20E, Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E, Bonanza Evaporation Pond in Sec. 2 T10S R23E.

**8. Ancillary Facilities:**

None are anticipated.

**9. Well Site Layout:** (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

The reserve pit will be lined, and when the reserve pit is closed, the pit liner will be buried below plow depth.

All pits will be fenced according to the following minimum standards:

39 inch net wire will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

The reserve pit fencing will be on three sides during drilling operations, and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 922-36A4BS/ 36G1T/ 36H2AS/ 36H2DS

Page 5  
Surface Use and Operations Plan

Location size may change prior to the drilling of the well due to current rig availability. If the proposed location is not large enough to accommodate the drilling rig the location will be re-surveyed and a Form 9 shall be submitted.

**10. Plans for Reclamation of the Surface:**

*Producing Location:*

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

A plastic, nylon reinforced liner will be used, it shall be torn and perforated before backfilling of the reserve pit.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

*Dry Hole/Abandoned Location:*

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 922-36A4BS/ 36G1T/ 36H2AS/ 36H2DS

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Surface Use and Operations Plan

**11. Surface/Mineral Ownership:**

SITLA  
675 East 500 South, Suite 500  
Salt Lake City, UT 84102

**12. Other Information:**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

A Class III archaeological survey report and paleontological survey report is attached.

**Kerr-McGee Oil & Gas Onshore LP**  
NBU 922-36A4BS/ 36G1T/ 36H2AS/ 36H2DS

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Surface Use and Operations Plan

**13. Lessee's or Operators' Representative & Certification:**

Kathy Schneebeck Dulnoan  
Staff Regulatory Analyst  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6226

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by State Surety Bond 22013542.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

\_\_\_\_\_  
Kathy Schneebeck Dulnoan

April 20, 2009  
Date

**IPC #09-53**

## **Paleontological Reconnaissance Survey Report**

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**Survey of Kerr McGee's Proposed Multi-Well Pad, Road Re-Route  
and Pipeline for "NBU #922-36A4BS, G1T, H2AS & H2DS"  
(Sec. 36, T 9 S, R 22 E)**

Archy Bench  
Topographic Quadrangle  
Uintah County, Utah

March 25, 2009

Prepared by Stephen D. Sandau  
Paleontologist for  
Intermountain Paleo-Consulting  
P. O. Box 1125  
Vernal, Utah 84078

## INTRODUCTION

At the request of Raleen White of Kerr McGee Oil & Gas Onshore LP and authorized by James Kirkland of the Office of the State Paleontologist, a paleontological reconnaissance survey of Kerr McGee's proposed multi-well pad, road re-route and pipeline for "NBU #922-36A4BS, G1T, H2AS, & H2DS" (Sec. 36, T 9 S, R 22 E) was conducted by David Alderks and Jason Klimek on March 18, 2009. The survey was conducted under Utah Paleontological Investigations Permit #07-356. This survey to collect any paleontological materials discovered during the construction processes in danger of damage or destruction was done to meet requirements of the National Environmental Policy Act of 1969, and other State and Federal laws and regulations that protect paleontological resources.

## FEDERAL AND STATE REQUIREMENTS

As mandated by the State of Utah, paleontologically-sensitive geologic formations on State lands that may be impacted due to ground disturbance require paleontological evaluation. This requirement complies with:

- 1) The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et. Seq., P.L. 91-190);
- 2) The Federal Land Policy and Management Act (FLPMA) of 1976 (90 Stat. 2743, 43 U.S.C. § 1701-1785, et. Seq., P.L. 94-579).
- 3) The National Historic Preservation Act. 16 U.S.C. § 470-1, P.L. 102-575 in conjunction with 42 U.S.C. § 5320; and
- 4) The Utah Geological Survey. S. C. A.: 63-73-1. (1-21) and U.C.A.: 53B-17-603.

BLM, 2008: BLM IM 2009-011 Assessment and Mitigation of Potential Impacts to Paleontological Resources. USDI – BLM Washington Office directive, October 29, 2008 replaces the Condition Classification System from Handbook H-8270-1. The following section outlines the new Potential Fossil Yield Classification (PFYC) System. Geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts, with a higher class number indicating a higher potential.

- **Class 1 – Very Low.** Geologic units (igneous, metamorphic, or Precambrian) not likely to contain recognizable fossil remains.
- **Class 2 – Low.** Sedimentary geologic units not likely to contain vertebrate fossils or scientifically significant non-vertebrate fossils. (Including modern eolian, fluvial, and colluvial deposits etc...)
- **Class 3 – Moderate or Unknown.** Fossiliferous sedimentary geologic units where fossil content varies in significance, abundance, and predictable occurrence; or sedimentary units of unknown fossil potential.
  - **Class 3a – Moderate Potential.** The potential for a project to be sited on or impact a significant fossil locality is low, but is somewhat higher for common fossils.

- **Class 3b – Unknown Potential.** Units exhibit geologic features and preservational conditions that suggest significant fossils could be present, but little information about the paleontological resources of the unit or the area is known.
- **Class 4 – High.** Geologic units containing a high occurrence of vertebrate fossils or scientifically significant invertebrate or plant fossils, but may vary in abundance and predictability.
  - **Class 4a** – Outcrop areas with high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 4b** – Areas underlain by geologic units with high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.
- **Class 5 – Very High.** Highly fossiliferous geologic units that consistently and predictably produce vertebrate fossils or scientifically significant invertebrate or plant fossils.
  - **Class 5a** - Outcrop areas with very high potential are extensive (greater than two acres) and paleontological resources may be susceptible to adverse impacts from surface disturbing actions.
  - **Class 5b** - Areas underlain by geologic units with very high potential but have lowered risks of disturbance due to moderating circumstances such as a protective layer of soil or alluvial material; or outcrop areas are smaller than two contiguous acres.

It should be noted that many fossils, though common and unimpressive in and of themselves, can be important paleo-environmental, depositional, and chronostratigraphic indicators.

## LOCATION

Kerr McGee's proposed multi-well pad, road re-route and pipeline for "NBU #922-36A4BS, G1T, H2AS, & H2DS" (Sec. 36, T 9 S, R 22 E) is located on lands managed by the State of Utah Trust Lands Administration (SITLA) in the Coyote Wash area, about 2 miles east of the White River, and some 17 miles southwest of Bonanza, Utah. The project area can be found on the Archy Bench 7.5 minute U. S. Geological Survey Quadrangle Map, Uintah County, Utah.

## PREVIOUS WORK

The basins of western North America have long produced some of the richest fossil collections in the world. Early Cenozoic sediments are especially well represented throughout the western interior. Paleontologists started field work in Utah's Uinta Basin as early as 1870 (Betts, 1871; Marsh, 1871, 1875a, 1875b). The Uinta Basin is located in the northeastern corner

of Utah and covers approximately 31,000 sq. km (12,000 sq. miles) ranging in elevation from 1,465 to 2,130 m (4,800 to 7,000 ft) (Marsell, 1964; Hamblin et al., 1987). Middle to late Eocene time marked a period of dramatic change in the climate, flora, (Stucky, 1992) and fauna (Black and Dawson, 1966) of North America.

## **GEOLOGICAL AND PALEONTOLOGICAL OVERVIEW**

Early in the geologic history of Utah, some 1,000 to 600 Ma, an east-west trending basin developed creating accommodation for 25,000 feet of siliclastics. Uplift of that filled-basin during the early Cenozoic formed the Uinta Mountains (Rasmussen et al., 1999). With the rise of the Uinta Mountains the asymmetrical synclinal Uinta Basin is thought to have formed through the effects of down warping in connection with the uplift. Throughout the Paleozoic and Mesozoic deposition fluctuated between marine and non-marine environments laying down a thick succession of sediments in the area now occupied by the Uinta Basin. Portions of these beds crop out on the margins of the basin due to tectonic events during the late Mesozoic.

Early Tertiary Uinta Basin sediments were deposited in alternating lacustrine and fluvial environments. Large shallow lakes periodically covered most of the basin and surrounding areas during early to mid Eocene time (Abbott, 1957). These lacustrine sediments show up in the western part of the basin, dipping 2-3 degrees to the northeast and are lost in the subsurface on the east side. The increase of cross-bedded, coarse-grained sandstone and conglomerates preserved in paleo-channels indicates a transition to a fluvial environment toward the end of the epoch.

Four Eocene formations are recognized in the Uinta Basin: the Wasatch, Green River, Uinta and Duchesne River, respectively (Wood, 1941). The Uinta Formation is subdivided into two lithostratigraphic units namely: the Wagonhound Member (Wood, 1934), formerly known as Uinta A and B (Osborn, 1895, 1929) and the Myton Member previously regarded as the Uinta C.

Within the Uinta Basin in northeast Utah, the Uinta Formation in the western part of the basin is composed primarily of lacustrine sediments inter-fingering with over-bank deposits of silt and mudstone and westward flowing channel sands and fluvial clays, muds, and sands in the east (Bryant et al, 1990; Ryder et al, 1976). Stratigraphic work done by early geologists and paleontologists within the Uinta Formation focused on the definition of rock units and attempted to define a distinction between early and late Uintan faunas (Riggs, 1912; Peterson and Kay, 1931; Kay 1934). More recent work focused on magnetostratigraphy, radioscopic chronology, and continental biostratigraphy (Flynn, 1986; Prothero, 1996). Well-known for its fossiliferous nature and distinctive mammalian fauna of mid-Eocene Age, the Uinta Formation is the type formation for the Uintan Land Mammal Age (Wood et al, 1941).

The Duchesne River Formation of the Uinta Basin in northeastern Utah is composed of a succession of fluvial and flood plain deposits composed of mud, silt and sandstone. The source area for these late Eocene deposits is from the Uinta Mountains indicated by paleocurrent data (Anderson and Picard, 1972). In Peterson's (1931c) paper, the name "Duchesne Formation" was applied to the formation and it was later changed to the "Duchesne River Formation" by Kay

(1934). The formation is divided up into four members: the Brennan Basin, Dry Gulch Creek, LaPoint, and Starr Flat (Anderson and Picard, 1972). Debates concerning the Duchesne River Formation, as to whether its age was late Eocene or early Oligocene, have surfaced throughout the literature of the last century (Wood et al., 1941; Scott 1945). Recent paleo-magnetostratigraphic work (Prothero, 1996) shows that the Duchesne River Formation is late Eocene in time.

## FIELD METHODS

In order to determine if the proposed project area contained any paleontological resources, a reconnaissance survey was performed. An on-site observation of the proposed areas undergoing surficial disturbance is necessary because judgments made from topographic maps alone are often unreliable. Areas of low relief have potential to be erosional surfaces with the possibility of bearing fossil materials rather than surfaces covered by unconsolidated sediment or soils.

When found within the proposed construction areas, outcrops and erosional surfaces were checked to determine if fossils were present and to assess needs. Careful effort is made during surveys to identify and evaluate significant fossil materials or fossil horizons when they are found. Microvertebrates, although rare, are occasionally found in anthills or upon erosional surfaces and are of particular importance.

## PROJECT AREA

The project area is situated in the Wagonhound Member (Uinta B) of the Uinta Formation. The proposed well pad "NBU #922-36A4BS, G1T, H2AS & H2DS" is situated in the SE/NE quarter-quarter section of Sec. 36, T 9 S, R 22 E, and is approached by a proposed access road and pipeline from the south and a proposed access road from the north (Figure 1). The pad is staked on a small gentle hill and is surrounded by high outcrops to the north, west, and south with a prominent drainage forming the eastern edge of the area. The pit is staked on the western side of the pad. The geology of the proposed area consists of several beds of gray and maroon siltstones (approximately 8-14 inches in thickness) separated by layers of gray and green mudstone (approximately 1-4 feet in thickness). The area is also strewn with several large tan sandstone boulders that have tumbled down from a thick (about 12 feet) paleochannel that caps the outcrops that surround the north, west and south sides of the pad. A large area of the pad consists of previously disturbed materials.

The shattered fossilized remains of an unidentifiable turtle were discovered within an outcrop of gray mudstone on the northern end of the pad. Isolated fragments of bone were also discovered along the outcrops on the northern and western sides of the pad. Ichnofossils consisting of invertebrate burrows (*Planolites*) were discovered within the brown sandstone and gray siltstones throughout the area.

## SURVEY RESULTS

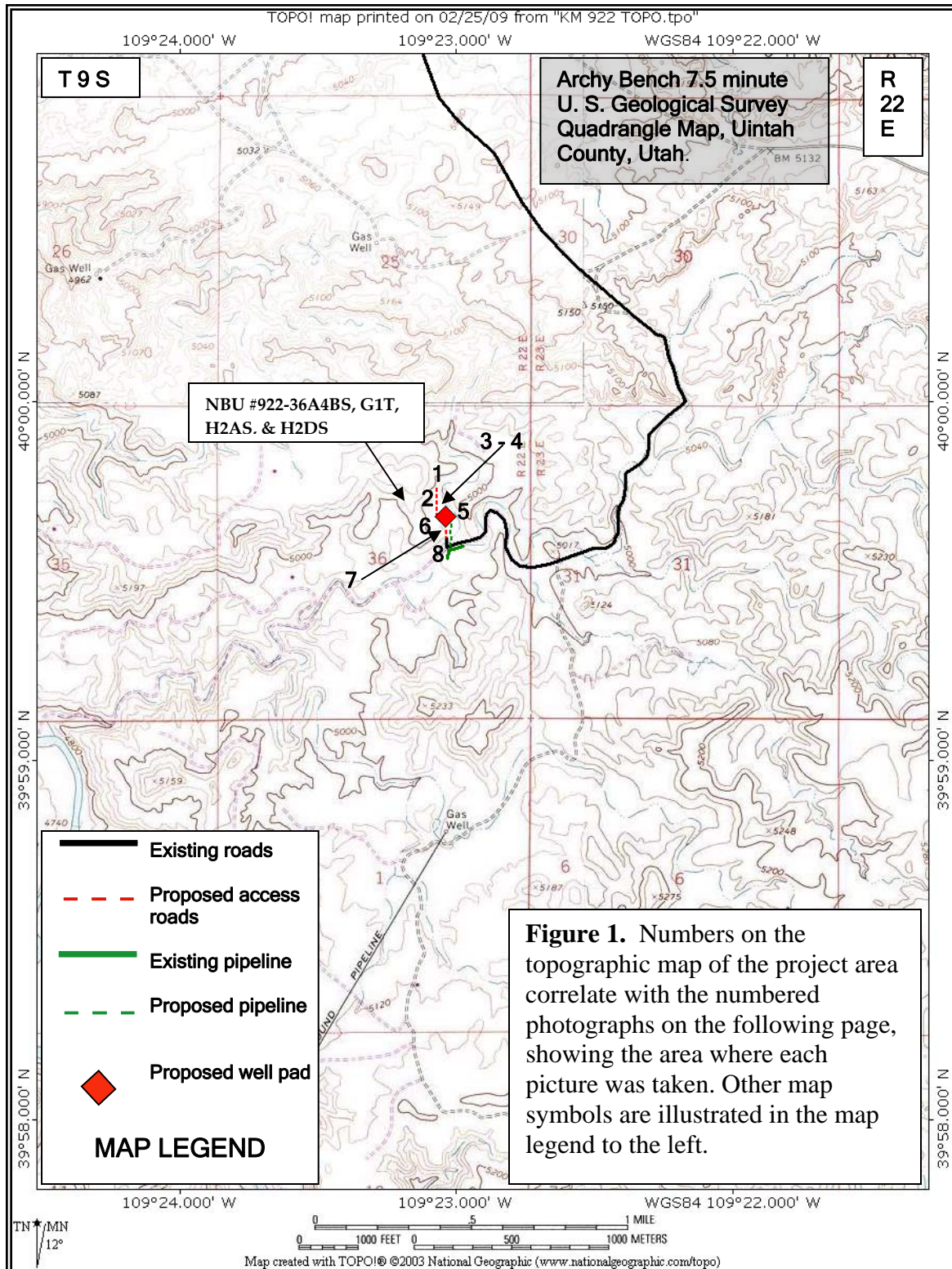
PROJECT	GEOLOGY	PALEONTOLOGY
“NBU #922-36A4BS, G1T, H2AS, & H2DS” (Sec. 36, T 4 S, R22 E)	The pad is staked on a small gentle hill and is surrounded by high outcrops to the north, west, and south with a prominent drainage forming the eastern edge of the area. The pit is staked on the western side of the pad. The geology of the proposed area consists of several beds of gray and maroon siltstones (approximately 8-14 inches in thickness) separated by layers of gray and green mudstone (approximately 1-4 feet in thickness). The area is also strewn with several large tan sandstone boulders that have tumbled down from a thick (about 12 feet) paleochannel that caps the outcrops that surround the north, west and south sides of the pad. A large area of the pad consists of previously disturbed materials.	The shattered fossilized remains of an unidentifiable turtle were discovered within an outcrop of gray mudstone on the northern end of the pad. Isolated fragments of bone were also discovered along the outcrops on the northern and western sides of the pad. Ichnofossils consisting of invertebrate burrows ( <i>Planolites</i> ) were discovered within the brown sandstone and gray siltstones throughout the area. <b>Class 3a</b>

## RECOMMENDATIONS

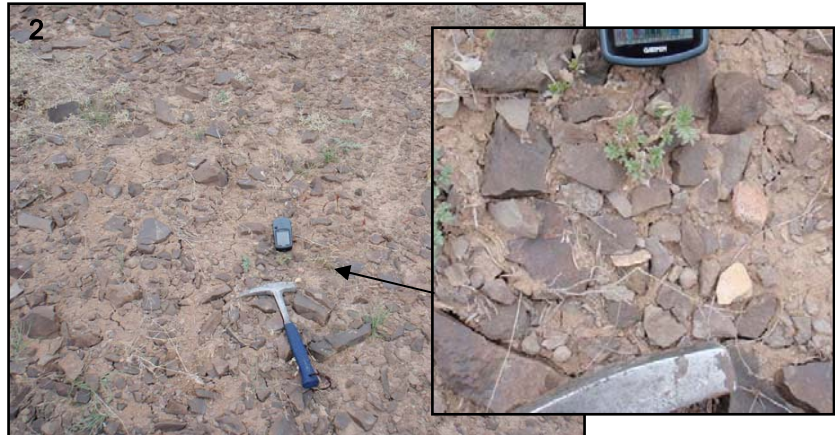
A reconnaissance survey was conducted for Kerr McGee's proposed multi-well pad, road re-route, and pipeline for “NBU #922-36A4BS, G1T, H2AS, & H2DS” (Sec. 36, T 9 S, R 22 E). The well pad and the associated re-route road and pipeline covered in this report showed little to no signs of vertebrate fossils. Therefore, we recommend that no paleontological restrictions should be placed on the development of the projects included in this report.

Buried pipeline will encounter Uinta formational sediments along most of the staked pipeline corridors yet indications from surface fossils predict that little if any vertebrate fossils will be disturbed.

**Nevertheless, if any vertebrate fossil(s) are found during construction within the project area, Operator (Lease Holder) will report all occurrences of paleontological resources discovered to a geologist with the Office of the State Paleontologist. The operator is responsible for informing all persons in the areas who are associated with this project of the requirements for protecting paleontological resources. Paleontological resources found on the public lands are recognized by the State as constituting a fragile and nonrenewable scientific record of the history of life on earth, and so represent an important and critical component of America's natural heritage.**



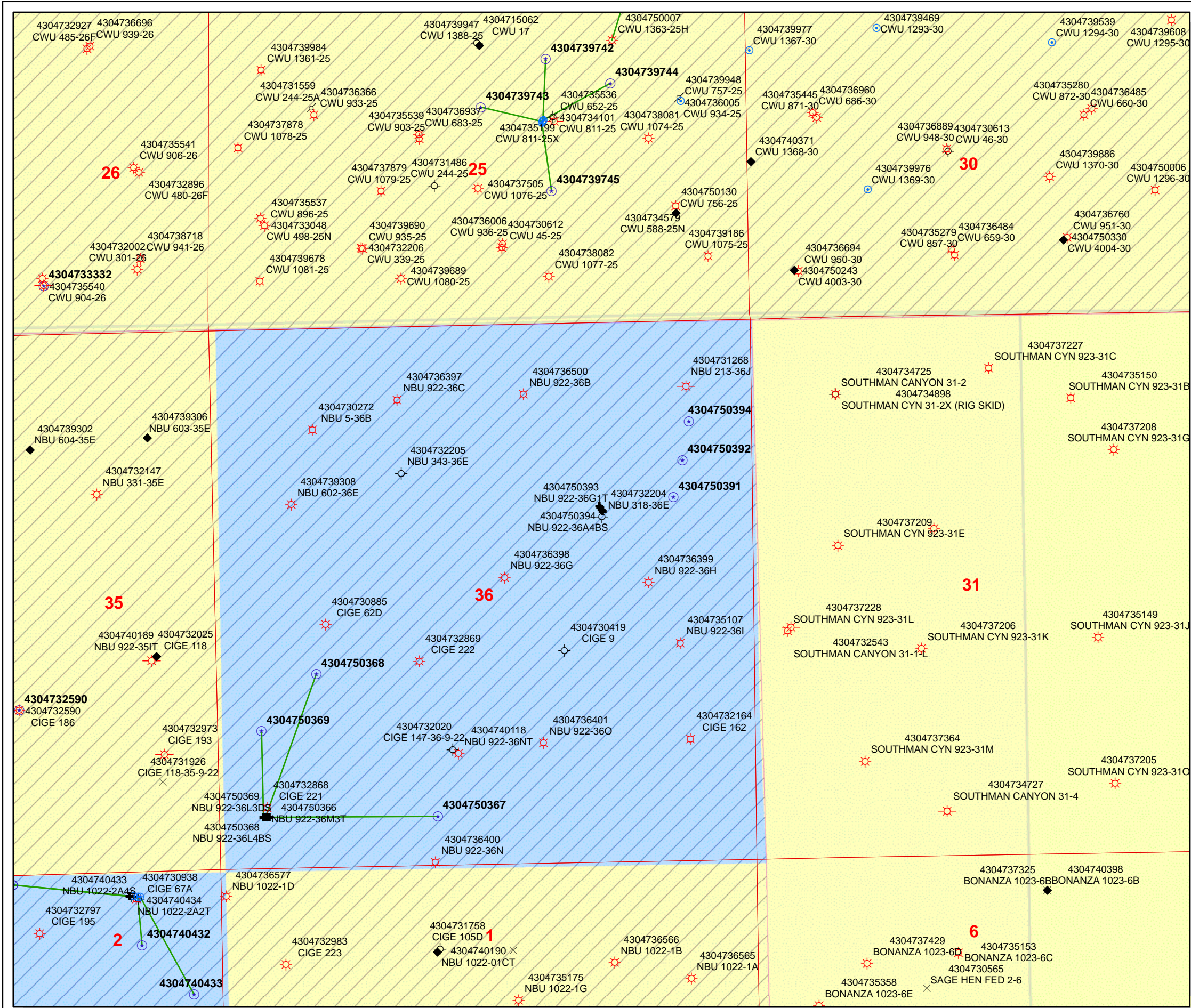
**Figure 1.** *continued...*



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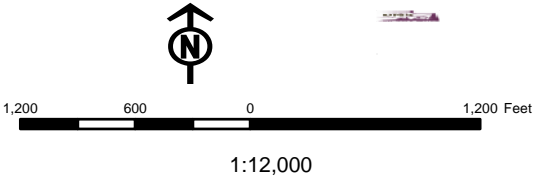


**API Number: 4304750392**  
**Well Name: NBU 922-36H2AS**  
**Township 09.0 S Range 22.0 E Section 36**  
**Meridian: SLBM**  
Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:  
Map Produced by Diana Mason

**Units**  
**STATUS**  
ACTIVE  
EXPLORATORY  
GAS STORAGE  
NF PP OIL  
NF SECONDARY  
PI OIL  
PP GAS  
PP GEOTHERML  
PP OIL  
SECONDARY  
TERMINATED  
**Fields**  
**STATUS**  
ACTIVE  
COMBINED  
Sections

**Wells Query Events**  
X <all other values>  
**GIS\_STAT\_TYPE**  
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APD  
DRL  
GI  
GS  
LA  
NEW  
OPS  
PA  
PGW  
POW  
RET  
SGW  
SOW  
TA  
TW  
WD  
WI  
WS





Kerr-McGee Oil & Gas Onshore LP  
P.O. Box 173779  
Denver, CO 80217-3779

May 4, 2009

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 922-36H2AS  
T9S-R22E  
Section 36: SWNE/SENE  
Surface: 1829' FNL, 1501' FEL  
Bottom Hole: 1360' FNL, 700' FEL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 922-36H2AS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Jessy Pink'.

Jessy Pink  
Landman

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

### IN REPLY REFER TO:

3160  
(UT-922)

May 8, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-50383	NBU 921-25M3DS Sec 25	T09S R21E 1855 FSL 0231 FWL
	BHL Sec 25	T09S R21E 0244 FSL 0587 FWL
43-047-50384	NBU 921-25M2DS Sec 25	T09S R21E 1860 FSL 0251 FWL
	BHL Sec 25	T09S R21E 0740 FSL 0623 FWL
43-047-50385	NBU 921-25M2AS Sec 25	T09S R21E 1865 FSL 0270 FWL
	BHL Sec 25	T09S R21E 1245 FSL 0643 FWL
43-047-50386	NBU 921-25L4BS Sec 25	T09S R21E 1870 FSL 0290 FWL
	BHL Sec 25	T09S R21E 1733 FSL 0677 FWL
43-047-50387	NBU 1022-14F4S Sec 14	T10S R22E 1435 FNL 1470 FWL
	BHL Sec 14	T10S R22E 2035 FNL 2255 FWL
43-047-50388	NBU 1022-14F2T Sec 14	T10S R22E 1407 FNL 1417 FWL
43-047-50389	NBU 1022-14D3S Sec 14	T10S R22E 1397 FNL 1400 FWL
	BHL Sec 14	T10S R22E 0900 FNL 0410 FWL
43-047-50390	NBU 1022-14C4S Sec 14	T10S R22E 1426 FNL 1453 FWL
	BHL Sec 14	T10S R22E 1290 FNL 1975 FWL

Page 2

43-047-50391 NBU 922-36H2DS Sec 36 T09S R22E 1846 FNL 1491 FEL  
BHL Sec 36 T09S R22E 1720 FNL 0795 FEL

43-047-50392 NBU 922-36H2AS Sec 36 T09S R22E 1829 FNL 1501 FEL  
BHL Sec 36 T09S R22E 1360 FNL 0700 FEL

43-047-50393 NBU 922-36G1T Sec 36 T09S R22E 1812 FNL 1512 FEL

43-047-50394 NBU 922-36A4BS Sec 36 T09S R22E 1795 FNL 1522 FEL  
BHL Sec 36 T09S R22E 0980 FNL 0630 FEL

43-047-50395 NBU 922-31O1AS Sec 31 T09S R22E 2314 FSL 0128 FEL  
BHL Sec 31 T09S R22E 1098 FSL 1494 FEL

43-047-50396 NBU 922-31J3AS Sec 31 T09S R22E 2313 FSL 0148 FEL  
BHL Sec 31 T09S R22E 1871 FSL 1973 FEL

43-047-50397 NBU 922-31I4AS Sec 31 T09S R22E 2315 FSL 0088 FEL  
BHL Sec 31 T09S R22E 1743 FSL 0153 FEL

43-047-50398 NBU 922-31I3CS Sec 31 T09S R22E 2314 FSL 0108 FEL  
BHL Sec 31 T09S R22E 1341 FSL 1125 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:5-8-09

**From:** Jim Davis  
**To:** Bonner, Ed; Mason, Diana  
**Date:** 6/1/2009 2:12 PM  
**Subject:** Kerr McGee Approvals (16)

**CC:** Garrison, LaVonne

The following wells have been approved by SITLA including arch and paleo clearance.

NBU 922-36A4BS (4304750394)  
NBU 922-36G1T (4304750393)  
NBU 922-36H2AS (4304750392)  
NBU 922-36H2DS (4304750391)

NBU 921-25M3DS (4304750383)  
NBU 921-25M2DS (4304750384)  
NBU 921-25M2AS (4304750385)  
NBU 921-25L4BS (4304750386)

NBU 922-31O1AS (4304750395)  
NBU 922-31J3AS (4304750396)  
NBU 922-31I3CS (4304750398)  
NBU 922-31I4AS (4304750397)

NBU 1022-19P1AS (4304750418)  
NBU 1022-20M4CS (4304750422)  
NBU 1022-20M1DS (4304750421)  
NBU 1022-20M4DS (4304750423)

-Jim

Jim Davis  
Utah Trust Lands Administration  
jimdavis1@utah.gov  
Phone: (801) 538-5156

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36H2AS 4304750392			
String	Surf	Prod		
Casing Size(in)	9.625	4.500		
Setting Depth (TVD)	2200	8600		
Previous Shoe Setting Depth (TVD)	20	2200		
Max Mud Weight (ppg)	8.4	12.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3520	7780		
Operators Max Anticipated Pressure (psi)	5209	11.6		

Calculations	Surf String	9.625	"
Max BPH (psi)	.052*Setting Depth*MW=	961	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	697	NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	477	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	481	NO Reasonable depth in area
Required Casing/BOPE Test Pressure=		2200	psi
*Max Pressure Allowed @ Previous Casing Shoe=		20	psi *Assumes 1psi/ft frac gradient

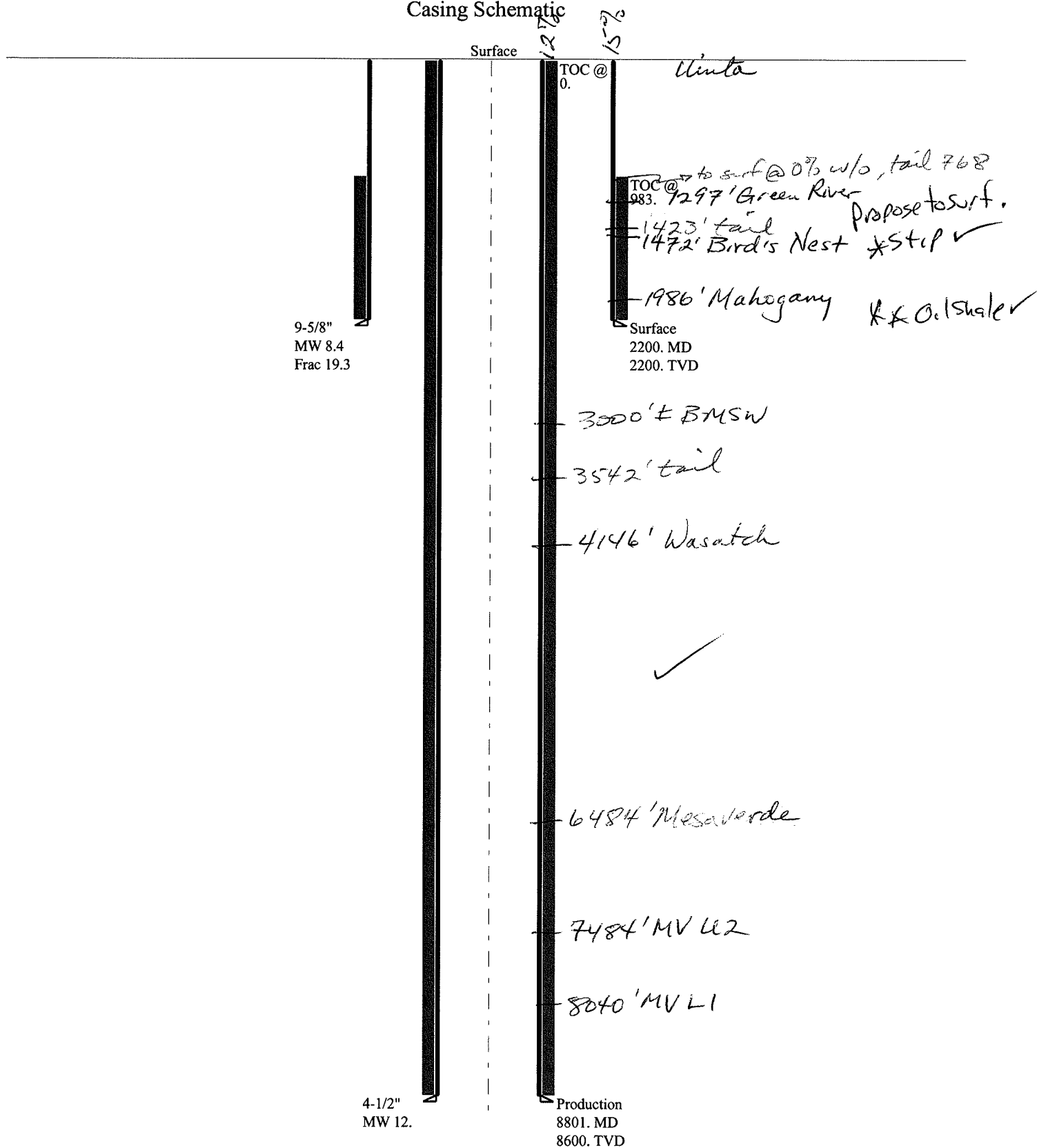
Calculations	Prod String	4.500	"
Max BPH (psi)	.052*Setting Depth*MW=	5366	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4334	YES
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3474	YES OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3958	NO Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2200	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BPH (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

43047503920000 NBU 922-36H2AS

Casing Schematic



Well name:	<b>43047503920000 NBU 922-36H2AS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Surface	Project ID: 43-047-50392
Location:	UINTAH COUNTY	

### Design parameters:

#### Collapse

Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 105 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 983 ft

#### Burst

Max anticipated surface pressure: 1,936 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,200 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 1,926 ft

### Directional Info - Build & Drop

Kick-off point 2100 ft  
Departure at shoe: 3 ft  
Maximum dogleg: 3 °/100ft  
Inclination at shoe: 3 °

#### Re subsequent strings:

Next setting depth: 8,600 ft  
Next mud weight: 12.000 ppg  
Next setting BHP: 5,361 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,200 ft  
Injection pressure: 2,200 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2200	9.625	36.00	J-55	LT&C	2200	2200	8.796	17989

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	960	1948	2.029	2200	3520	1.60	79.2	453	5.72 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: June 11, 2009  
Salt Lake City, Utah

#### Remarks:

Collapse is based on a vertical depth of 2200 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>43047503920000 NBU 922-36H2AS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-50392
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 194 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure: 3,469 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 5,361 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

**Directional well information:**

Kick-off point 2100 ft  
Departure at shoe: 925 ft  
Maximum dogleg: 3 °/100ft  
Inclination at shoe: 0 °

Tension is based on air weight.

Neutral point: 7,258 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8801	4.5	11.60	I-80	LT&C	8600	8801	3.875	116171
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5361	6360	1.186	5361	7780	1.45	99.8	212	2.13 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: June 17, 2009  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 8600 ft, a mud weight of 12 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

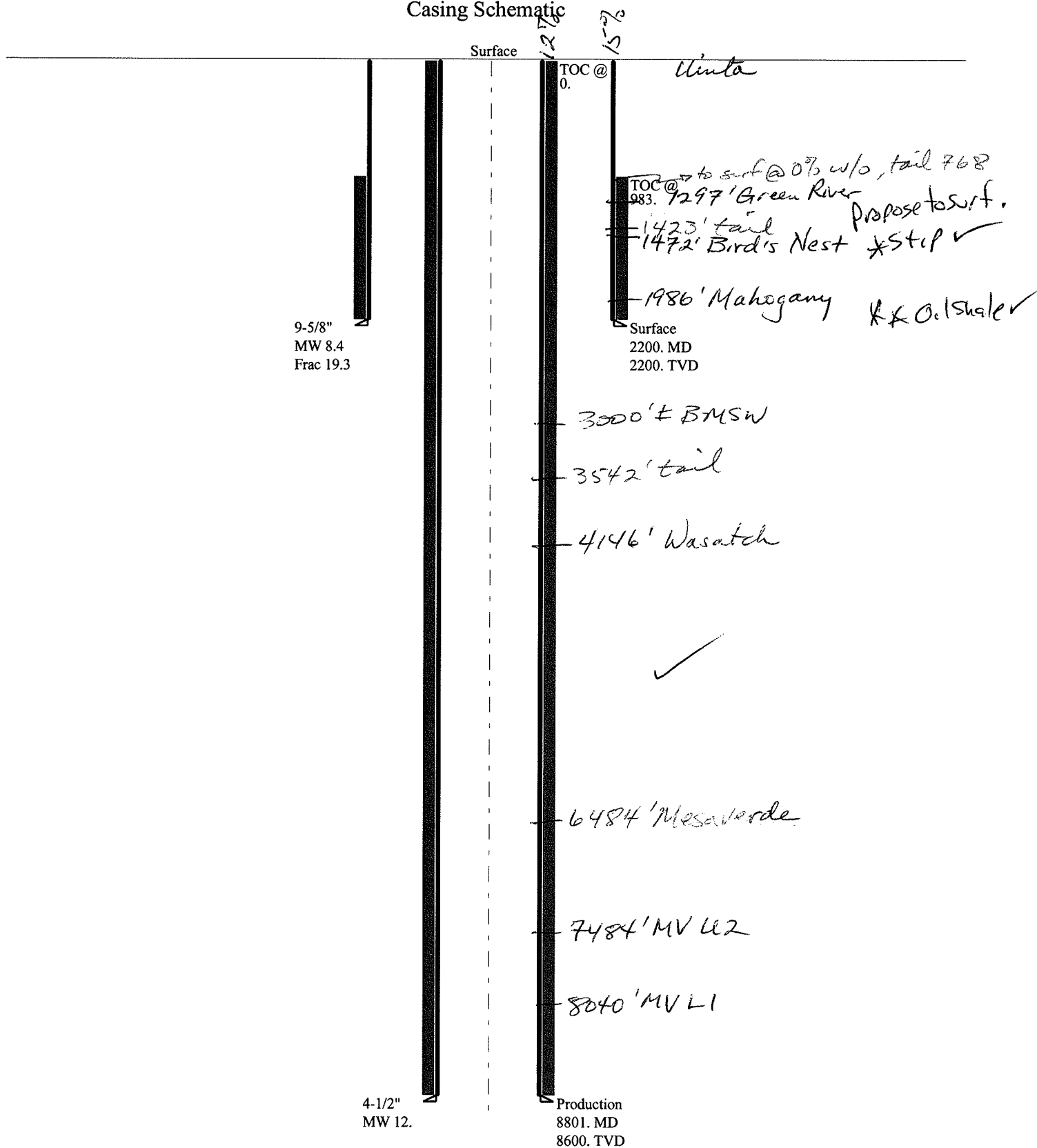
Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

43047503920000 NBU 922-36H2AS

Casing Schematic



Well name:	<b>43047503920000 NBU 922-36H2AS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Surface	Project ID: 43-047-50392
Location:	UINTAH COUNTY	

### Design parameters:

#### Collapse

Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 105 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 983 ft

#### Burst

Max anticipated surface pressure: 1,936 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,200 psi

No backup mud specified.

#### Tension:

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 1,926 ft

### Directional Info - Build & Drop

Kick-off point 2100 ft  
Departure at shoe: 3 ft  
Maximum dogleg: 3 °/100ft  
Inclination at shoe: 3 °

#### Re subsequent strings:

Next setting depth: 8,600 ft  
Next mud weight: 12.000 ppg  
Next setting BHP: 5,361 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,200 ft  
Injection pressure: 2,200 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2200	9.625	36.00	J-55	LT&C	2200	2200	8.796	17989

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	960	1948	2.029	2200	3520	1.60	79.2	453	5.72 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: June 11, 2009  
Salt Lake City, Utah

#### Remarks:

Collapse is based on a vertical depth of 2200 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

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*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>43047503920000 NBU 922-36H2AS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-50392
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 194 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure: 3,469 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 5,361 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

**Directional well information:**

Kick-off point 2100 ft  
Departure at shoe: 925 ft  
Maximum dogleg: 3 °/100ft  
Inclination at shoe: 0 °

Tension is based on air weight.

Neutral point: 7,258 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	8801	4.5	11.60	I-80	LT&C	8600	8801	3.875	116171
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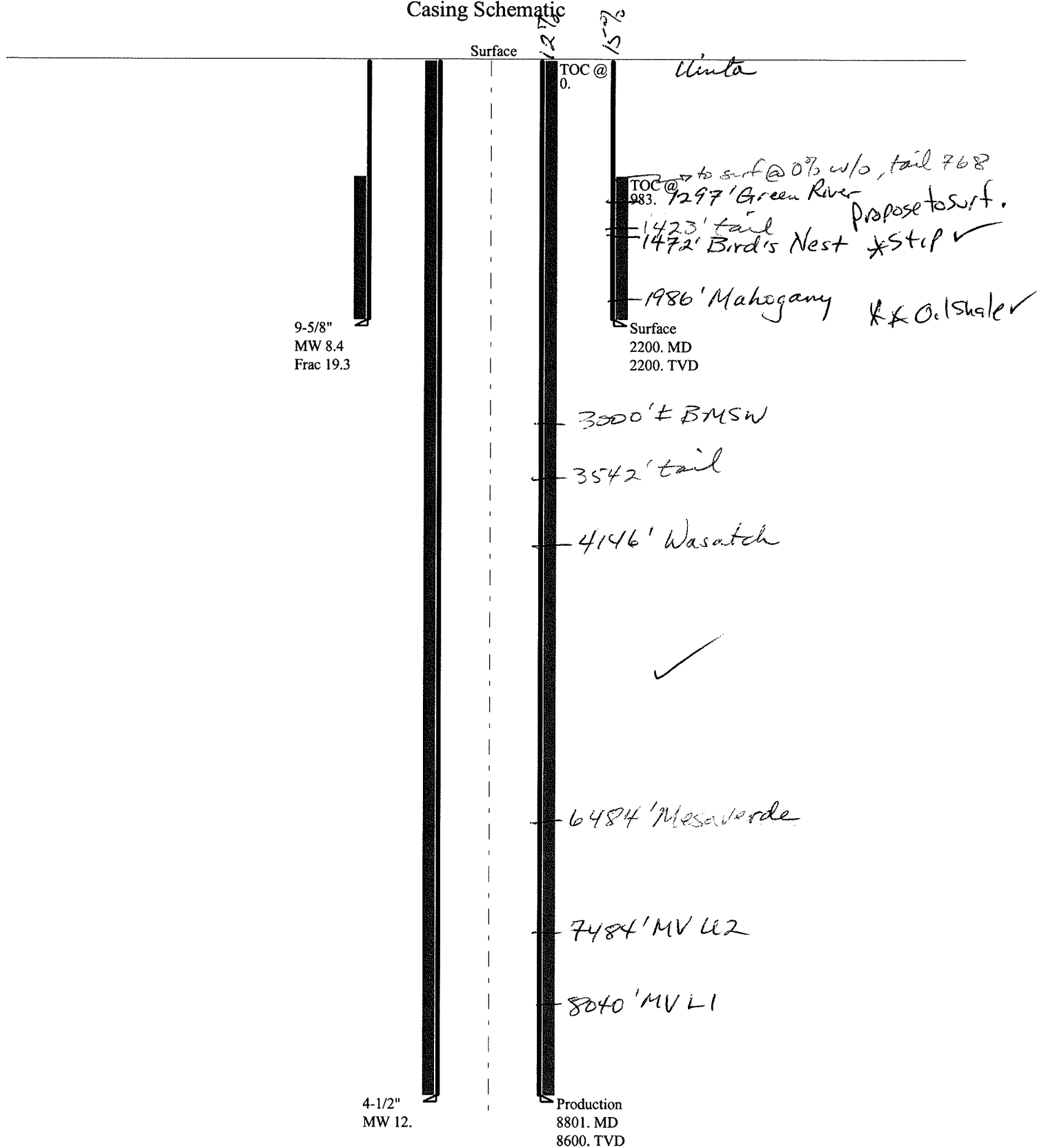
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43047503920000 NBU 922-36H2AS

Casing Schematic



Well name:	<b>43047503920000 NBU 922-36H2AS</b>	
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>	
String type:	Surface	Project ID: 43-047-50392
Location:	UINTAH COUNTY	

### Design parameters:

#### Collapse

Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

### Minimum design factors:

#### Collapse:

Design factor 1.125

#### Burst:

Design factor 1.00

### Environment:

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 105 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 983 ft

#### Burst

Max anticipated surface pressure: 1,936 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,200 psi

No backup mud specified.

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String type:	Production	Project ID:	43-047-50392
Location:	UINTAH COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

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**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
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# **ON-SITE PREDRILL EVALUATION**

## **Utah Division of Oil, Gas and Mining**

<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
<b>Well Name</b>	NBU 922-36H2AS				
<b>API Number</b>	43047503920000	<b>APD No</b>	1493	<b>Field/Unit</b>	NATURAL BUTTES
<b>Location: 1/4,1/4</b>	SWNE	<b>Sec</b>	36	<b>Tw</b>	9.0S
		<b>Rng</b>	22.0E	1829	FNL 1501 FEL
<b>GPS Coord (UTM)</b>	637985	4428230	<b>Surface Owner</b>		

### **Participants**

Floyd Bartlett (DOGM), Jim Davis (SITLA), Raleen White, Griz Oleen, Clay Einerson, Charles Chase and Tony Kzneck (Kerr McGee), Ben Williams (UDWR) and Kolby Kay (Timberline Engineering and Land Surveying).

### **Regional/Local Setting & Topography**

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs are known to exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43 air miles to the northwest. Access from Vernal is approximately 63.9 road miles following Utah State, Uintah County and oilfield development roads to the location.

The proposed 4 well pad for the NBU 922-36A4BS, NBU 922-36G1T, NBU 922-36H2AS, NBU 922-36H2DS encompasses the previous NBU 318-36B reclaimed dry hole location. The old location will be extended in all directions. It covers a small bowl and mound along the south side of a draw which limits extending the pad to the north. A new powerline restricts any additional movement of the pad to the south. The spoils from the reserve pit will fill a draw beyond the northwest side of the pad. When the pit is closed a diversion is needed along the west edge of the location running northerly then easterly joining the existing drainage. At Location Corner 1, fill should not extend into the bottom of the draw so as to unduly restrict any flows. On the south, spoils will also be extended toward the powerline. The dry hole lacks a surface marker. The sub-surface marker and well bore must not be disturbed. The powerline also must be avoided.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA attended the pre-site and was agreeable to the modifications. He had no additional concerns regarding the proposal.

### **Surface Use Plan**

#### **Current Surface Use**

Grazing  
Recreational  
Wildlife Habitat  
Existing Well Pad

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width</b> 338 <b>Length</b> 475	Onsite	UNTA

**Ancillary Facilities** N

### **Waste Management Plan Adequate?**

### **Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

The area is mostly barren of vegetation. A few greasewood and halogeton plants exist. .

Sheep, deer, antelope, coyote, and other small mammals and birds.

**Soil Type and Characteristics**

Deep sandy clay loam.

**Erosion Issues** N

**Sedimentation Issues** Y

When the pit is closed a diversion is needed along the west edge of the location running northerly then easterly joining the existing drainage.

**Site Stability Issues** N

**Drainage Diversion Required?** Y

When the pit is closed a diversion is needed along the west edge of the location running northerly then easterly joining the existing drainage.

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?**

**Reserve Pit**

**Site-Specific Factors**

**Site Ranking**

<b>Distance to Groundwater (feet)</b>	100 to 200	5
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>		20
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Present	15
<b>Final Score</b>		55

Sensitivity Level

**Characteristics / Requirements**

The reserve pit is planned in an area of cut in the west side of the location. It has been reduced in width at the south end so as to avoid the powerline. Dimensions are 75' to 125' feet wide by 250' long and 12' deep. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a 30-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock

**Closed Loop Mud Required?** N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

**Other Observations / Comments**

Floyd Bartlett  
**Evaluator**

5/20/2009  
**Date / Time**

# Application for Permit to Drill

## Statement of Basis

6/25/2009

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
1493	43047503920000	LOCKED	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 922-36H2AS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	SWNE 36 9S 22E S 1829 FNL 1501 FEL GPS Coord (UTM) 637985E 4428221N				

### Geologic Statement of Basis

Kerr McGee proposes to set 2,200' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 3,000'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters up hole. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill  
APD Evaluator

6/3/2009  
Date / Time

### Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¼ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs are known to exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43 air miles to the northwest. Access from Vernal is approximately 63.9 road miles following Utah State, Uintah County and oilfield development roads to the location.

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Both the surface and minerals are owned by SITLA. Jim Davis of SITLA attended the pre-site and was agreeable to the modifications. He had no additional concerns regarding the proposal.

Ben Williams of the Utah Division of Wildlife Resources also attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the wells at this location.

Floyd Bartlett  
Onsite Evaluator

5/20/2009  
Date / Time

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# Application for Permit to Drill

## Statement of Basis

6/25/2009

Utah Division of Oil, Gas and Mining

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Page 2

**Conditions of Approval / Application for Permit to Drill**

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 5/3/2009

**API NO. ASSIGNED:** 43047503920000

**WELL NAME:** NBU 922-36H2AS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6007

**CONTACT:** Kathy Schneebeck-Dulnoan

**PROPOSED LOCATION:** SWNE 36 090S 220E

**Permit Tech Review:** ☒

**SURFACE:** 1829 FNL 1501 FEL

**Engineering Review:** ☒

**BOTTOM:** 1360 FNL 0700 FEL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 39.99480

**LONGITUDE:** -109.38369

**UTM SURF EASTINGS:** 637985.00

**NORTHINGS:** 4428221.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** ML 22650

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 3 - State

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

☒ **PLAT**

☒ **Bond:** STATE/FEE - 22013542

☐ **Potash**

☒ **Oil Shale 190-5**

☐ **Oil Shale 190-3**

☐ **Oil Shale 190-13**

☒ **Water Permit:** Permit #43-8496

☐ **RDCC Review:**

☐ **Fee Surface Agreement**

☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

☐ **R649-2-3.**

**Unit:** NATURAL BUTTES

☐ **R649-3-2. General**

☐ **R649-3-3. Exception**

☒ **Drilling Unit**

**Board Cause No:** Cause 173-14

**Effective Date:** 12/2/1999

**Siting:** 460' fr u bdry & uncomm. tract

☒ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**  
3 - Commingle - ddoucet  
5 - Statement of Basis - bhll  
15 - Directional - dmason  
17 - Oil Shale 190-5(b) - dmason  
25 - Surface Casing - hmadonald



JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 922-36H2AS  
**API Well Number:** 43047503920000  
**Lease Number:** ML 22650  
**Surface Owner:** STATE  
**Approval Date:** 6/30/2009

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

In accordance with Utah Admin. R. 649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following action during drilling of this well:

- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to spudding the well - contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program - contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well - contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well - contact Dustin Doucet
- Any changes to the approved drilling plan - contact Dustin Doucet

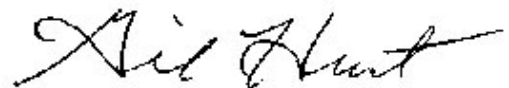
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at: (801) 538-5338 office  
(801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office  
(801) 733-0983 home

**Reporting Requirements:**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**Approved By:**



Gil Hunt  
Associate Director, Oil & Gas

## DIVISION OF OIL, GAS AND MINING

### SPUDDING INFORMATION

Name of Company: KERR-McGEE OIL & GAS ONSHORE,L.P.

Well Name: NBU 922-36H2AS

Api No: 43-47-50392 Lease Type: STATE

Section 36 Township 09S Range 22E County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

### SPUDDED:

Date 07/31/2009

Time 10:30 AM

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by JAMES GOBER

Telephone # (435) 828-1724

Date 08/03/2009 Signed CHD

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML 22650
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 922-36H2AS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1829 FNL 1501 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNE Section: 36 Township: 09.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047503920000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> Uintah		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>ALTER CASING</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CASING REPAIR</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 8/3/2009	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>OTHER:</b>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU PROPETRO AIR RIG ON 08/03/2009. DRILLED 12-1/4" SURFACE HOLE TO 2110'. PUMP FLUSH OF 150 BBLS OF H2O, PUMP 20 BBLS OF GEL WATER. PUMP 350 SX TAIL PREM CLASS G @ 15.8 PPG, 1.15 YIELD. DROP PLUG ON FLY, LIFT OF 400 PSI, BUMP PLUG 900 PSI, FLOAT HELD. PUMP TOP OUT #1 W/100 SX PREM CLASS G @ 15.8 PPG, 1.15 YIELD. WAIT 2 HOURS. PUMP TOP OUT #2 W/100 SX PREM CLASS G @ 15.8 PPG, 1.15 YIELD DOWN BACK SIDE. CEMENT NOT RISING. WILL REDI MIX TO SURFACE. WORT		
<div style="display: flex; justify-content: space-between;"> <div> <b>NAME (PLEASE PRINT)</b>            Andy Lytle         </div> <div> <b>PHONE NUMBER</b>            720 929-6100         </div> <div> <b>TITLE</b>            Regulatory Analyst         </div> </div>		
<div style="display: flex; justify-content: space-between;"> <div> <b>SIGNATURE</b>            N/A         </div> <div> <b>DATE</b>            8/5/2009         </div> </div>		

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML 22650
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 922-36H2AS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1829 FNL 1501 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNE Section: 36 Township: 09.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047503920000
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>ALTER CASING</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CASING REPAIR</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 9/12/2009	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
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	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>OTHER:</b>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>		
FINISHED DRILLING FROM 2110' TO 8,884' ON 09/11/2009. RAN 4-1/2" 11.6# I-80 PRODUCTION CSG. CMT W/40 BBLS SPACER. LEAD CMT W/565 SX CLASS G PREM LITE @ 12.3 PPG, 2.12 YIELD. TAILED CMT W/1300 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.31 YIELD. DISPLACED W/137 BBLS WATER, BUMPED PLUG, FLOAT HELD. RETURNED 2 BBLS CMT TO SURFACE. RELEASE ENSIGN 145 RIG ON 09/12/2009 AT 18:00 HRS.		
<div style="text-align: right;"> <b>Accepted by the</b>  <b>Utah Division of</b>  <b>Oil, Gas and Mining</b>  <b>FOR RECORD ONLY</b>          September 14, 2009       </div>		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 9/14/2009	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> Uintah		<b>STATE:</b> UTAH
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<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>ALTER CASING</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CASING REPAIR</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 11/12/2009	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
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	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>OTHER:</b>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 11/12/2009 AT 12:15 P.M. PLEASE REFER TO THE ATTACHED CHRONOLOGICAL WELL HISTORY.		
<b>Accepted by the</b> <b>Utah Division of</b> <b>Oil, Gas and Mining</b> <b>FOR RECORD ONLY</b> November 17, 2009		
<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 11/16/2009	

# US ROCKIES REGION

## Operation Summary Report

Well: NBU 922-36H2AS [YELLOW]	Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH	Site: NBU 922-36G PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 7/21/2009	End Date: 9/12/2009
Active Datum: RKB @4,974.00ft (above Mean Sea Level)	UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/3/2009	12:00 - 14:30	2.50	MIRU	01	B	P		INSTALL AIR BOWL AND BOWIE LINE, RIG UP RIG, RIG UP COMPRESSOR AND BOOSTER.
	14:30 - 16:30	2.00	DRLPRO	02	A	P		P/U AIR SPUD 14:30 8/3/2009 AIR HAMMER AND DRILL 40'-170'. DRILL W/ AIR MIST.
	16:30 - 19:30	3.00	DRLPRO	05	A	P		TRIP OUT OF HOLE LD AIR HAMMER, P/U USED 2.25 BENT HOUSE MOTOR 7/8 LOBE 4 STAGE .16 RPM (26.5 HRS), M/U HC507Z 2ND RUN, P/U AND SCRIBE DIRECTIONAL TOOLS, P/U 8" ASSEMBLY
	19:30 - 21:00	1.50	DRLPRO	01	B	P		INSTALL RUBBER IN AIR BOWL.
	21:00 - 0:00	3.00	DRLPRO	02	D	P		RIG UP PUMPS, CHECK FOR LEAKS, PRE SPUD INSPECTIONS.
8/4/2009	0:00 - 17:30	17.50	DRLSUR	02	D	P		DRILL SLIDE 170'- 370'. WOB 5-12K, RPM =40, GPM= 588, 94 DH RPMs.
	17:30 - 18:30	1.00	DRLSUR	04	A	P		DRILL SLIDE 370'- 2110' (1740',99'/HR) TD 17:30 8/04/2009 WOB 16-18K, RPM 40, MOT. RPM 114, GPM 714. LOSS CIRC 1570', ASSISTED CIRC W/ AIR BOOSTER.
	18:30 - 22:00	3.50	CSG	05	D	P		CIRC AND CLEAN HOLE. TO RUN CSG.
	22:00 - 0:00	2.00	CSG	11	A	P		HOLD SAFETY MEETING AND LDDS, AND LD DIRECTIONAL TOOLS.
8/5/2009	0:00 - 1:00	1.00	CSG	11	A	P		RIG UP TO RUN CSG AND RAN 47 JTS OF 9-5/8" 36# J-55 LT&C. PUMP THROUGH CSG 500'. AND 1500'.
	1:00 - 1:30	0.50	RDMO	01	E	P		RUN 47 JTS OF 9-5/8" 36# J-55 LT&C CSG AND LAND 2074.55' KB, BAFFLE PLATE RAN INSIDE TOP OF SHOE JT 2030' KB.
	1:30 - 6:00	4.50	CSG	15	A	P		RIG DOWN RIG AND MOVE OFF. RELEASE RIG 01:30 8/5/2009.
9/4/2009	17:00 - 18:00	1.00	DRLPRO	01	A	P		HOLD SAFETY MEETING AND RIG UP PRO PETRO CEMENTERS AND PUMP FLUSH OF 150 BBLS OF H2O, PUMP 20 BBLS OF GEL WATER, PUMP 350 SX (71.6 BBLS) OF 15.8#, 1.15 YD, 5 GAL SKOF PREMIUM CEM.DROP PLUG ON FLY, LIFT OF 400 PSI, BUMP PLUG 900 PSI, FLOAT HELD. PUMP TOP OUT #1 100 SX (20 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK OF PREMIUM CEMENT, DOWN BACKSIDE. WAIT 2 HRS, PUMP 2ND TOP OUT OF 100 SX 15.8# 1.15 YD. 5 GAL/SK OF PREMIUM CEMENT DOWN BACK SIDE. CEMENT NOT RISING, WILL REDI MIX TO SURFACE.
	18:00 - 19:00	1.00	DRLPRO	01	C	P		PREP TO SKID RIG
	19:00 - 22:30	3.50	DRLPRO	14	A	P		SKID RIG
	22:30 - 0:00	1.50	DRLPRO	15	A	P		NU BOPE
9/5/2009	0:00 - 3:00	3.00	DRLPRO	15	A	P		TEST BOPE
	3:00 - 4:30	1.50	DRLPRO	06	A	P		TEST BOP- 250 LOW, 5000 HIGH, ANNULAR 250 LOW, 2500 HIGH
	4:30 - 6:00	1.50	DRLPRO	06	A	P		PU HTC Q506F BIT, NEW MUD MOTOR, DIR WORK
	6:00 - 7:00	1.00	DRLPRO	01	B	P		TIH W/ BHA, TAG CMT AT 2000'
	7:00 - 7:30	0.50	DRLPRO	02	F	P		RIG INSPECTION, INSTALL CELLAR COVER
	7:30 - 12:30	5.00	DRLPRO	02	D	P		DRILL OUT SHOE TRACK 2075, , DRILL AHEAD
								DRILL & SLIDE 2075 TO 2306, WOB- 13-18, GPM-486, SPP ON/OFF BOTTOM-1460/1120, 300-500 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-8/5, MW-8.5, VIS-27

RECEIVED November 16, 2009

# US ROCKIES REGION

## Operation Summary Report

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009		Spud Date: 8/3/2009	
Project: UTAH-UINTAH		Site: NBU 922-36G PAD		Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING		Start Date: 7/21/2009		End Date: 9/12/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/6/2009	12:30 - 13:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:00 - 0:00	11.00	DRLPRO	02	D	P		DRILL& SLIDE 2306 TO 3070, WOB- 13-18, GPM-486, SPP ON/OFF BOTTOM-1540/1190, 300-500 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-8/5, MW-8.5, VIS-27
	0:00 - 12:30	12.50	DRLPRO	02	D	P		DRILL& SLIDE 3070 - 4028, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1540/1190, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-8/5, MW-8.5, VIS-26
	12:30 - 13:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:00 - 0:00	11.00	DRLPRO	02	A	P		DRILL& SLIDE 4028 - 4930, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1730/1390, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/8, MW-8.4, VIS-26
	0:00 - 13:00	13.00	DRLPRO	02	D	P		DRILL& SLIDE 4930 - 6020, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1730/1390, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/7, MW-8.4, VIS-26
9/7/2009	13:00 - 13:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:30 - 22:30	9.00	DRLPRO	02	D	P		DRILL& SLIDE 6020 -6597 , WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1790/1390, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/7, MW-8.5, VIS-26, STARTING TO EXPERIENCE SOLIDS PROBLEMS
	22:30 - 0:00	1.50	DRLPRO	05	A	P		CIRC AND MUD UP TO 9 PPG, 38 VIS
	0:00 - 11:30	11.50	DRLPRO	02	D	P		DRILL& SLIDE 6597 - 7198, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2130/2110, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/8, MW-10.0, VIS-26
	11:30 - 12:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:00 - 0:00	12.00	DRLPRO	02	D	P		DRILL& SLIDE 7198 - 7753, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2130/2110, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-14/9, MW-10.0, VIS-26
9/8/2009	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL& SLIDE 7753 - 8194, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2540/2220, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/8, MW-10.8, VIS-47
	11:00 - 11:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	11:30 - 20:00	8.50	DRLPRO	02	D	P		DRILL& SLIDE 8194 - 8421 , WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2540/2220, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-14/10, MW-10.8, VIS-47, BIT QUIT DRILLING OVER THE LAST HOUR
	20:00 - 21:00	1.00	DRLPRO	05	C	P		PUMP SWEEP, CIRC HOLE CLEAN
	21:00 - 0:00	3.00	DRLPRO	06	A	P		TRIP FOR BIT
	0:00 - 10:00	10.00	DRLPRO	06	A	P		TRIP FOR BIT, Q506F BIT WAS DBR
9/10/2009	10:00 - 10:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	10:30 - 11:30	1.00	DRLPRO	06	A	P		TRIP FOR BIT
	11:30 - 12:30	1.00	DRLPRO	03	D	P		WASH AND REAM FROM 8104 TO 8421, LOST #1 GENERATOR, FAN HUB BEARINGS FAILED
	12:30 - 22:00	9.50	DRLPRO	02	D	P		DRILL& SLIDE 8421 TO 8870 , WOB- 20-24, GPM-498, SPP ON/OFF BOTTOM-2540/2220, 358-490 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-14/10, MW-11.7, VIS-47, BGG-800-2800 W/ 3-5 FT FLARE, RAISING MW TO 12.0
	22:00 - 0:00	2.00	DRLPRO	08	A	Z		LOST #2 GENERATOR, FAN HUB BEARING FAILED, PARTS & MECHANICS DUE ON LOCATION 03:00-04:00

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# US ROCKIES REGION

## Operation Summary Report

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH	Site: NBU 922-36G PAD		Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 7/21/2009	End Date: 9/12/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SVNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/11/2009	0:00 - 6:30	6.50	DRLPRO	08	A	P		REPAIR GENERATOR
	6:30 - 7:00	0.50	DRLPRO	02	D	P		DRILL& SLIDE 8870 -8884, WOB- 20-24, GPM-498, SPP ON/OFF BOTTOM-2740/2520, 358-490 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-16/10, MW-12.0, VIS-47, BGG-40-50
	7:00 - 8:00	1.00	DRLPRO	05	F	P		PUMP SWEEP, CIRC HOLE
	8:00 - 10:30	2.50	DRLPRO	06	E	P		10 STD SHORT TRIP
	10:30 - 11:30	1.00	DRLPRO	05	E	P		PUMP SWEEP, CIRC HOLE
	11:30 - 12:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:00 - 14:30	2.50	DRLPRO	06	A	P		ROTATE & PUMP OUT,
	14:30 - 15:00	0.50	DRLPRO	06	A	P		POOH FOR LOGS
	15:00 - 15:30	0.50	DRLPRO	08	B	Z		CHANGE OUT IRON ROUGH NECK HYD RAM
	15:30 - 22:00	6.50	DRLPRO	06	A	P		POOH FOR LOGS
	22:00 - 0:00	2.00	DRLPRO	11	D	P		HOLD SAFETY MEETING, RU LOGGERS, RUN OPEN HOLE LOGS
9/12/2009	0:00 - 2:30	2.50	DRLPRO	11	D	P		RUN TRIPLE COMBO LOGS, BRIDGED OUT AT 6602, LOG UP FROM THERE
	2:30 - 4:00	1.50	DRLPRO	12	A	P		HOLD SAFFETY MEETING, RU CASERS
	4:00 - 12:00	8.00	DRLPRO	12	C	P		RUN 209 JTS 4 1/2 11.6#, I-80 BTC CSG, WASH THRU BRIDGE 8' AT 6600, TIH, RUN INTO TIGHT SPOT AT 8140, CSG HUNG UP, KICK PUMPS IN AND GET MOVEMENT DOWN, CAN NOT POOH, WASH DOWN 12' FALL THRU, STILL CAN NOT MOVE UP, TIH TO BOTTOM, PU 20' MARKER JT AND LAND CSG W/ SHOE AT 8866
	12:00 - 13:30	1.50	DRLPRO	05	D	P		CIRC OUT TRIP GAS, CIR HOLE
	13:30 - 16:00	2.50	DRLPRO	12	E	P		PUMP 40 BBLS SPACER, 565 SX 12.3 LEAD, 1300 SX 14.3 TAIL, DISPLACED W/ 137 BBLS WATER, BUMPED PLUG, FLOAT HELD, RETURNED 2 BBLS CMT TO SURFACE
	16:00 - 16:30	0.50	DRLPRO	01	E	P		ND & FLUSH BOP, FLOW LINE, 4" MUD LINES
	16:30 - 18:00	1.50	DRLPRO	01	E	P		SET SLIPS,-110K, CUT CSG, CLEAN PITS, RELEASE RIG AT 18:00

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**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]			Spud Conductor: 7/31/2009			Spud Date: 8/3/2009		
Project: UTAH-UINTAH			Site: NBU 922-36G PAD				Rig Name No:	
Event: COMPLETION			Start Date: 10/30/2009				End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)			UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/30/2009	-							
11/2/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, WIRE LINE
	7:15 - 16:00	8.75	COMP	36	E	P		N/U FRAC VALVES, P/T CSG TO 7500#, MIRU CASED HOLE SOLUTIONS, P/U RIIH W/ 3-3/8 EXPAND, 23 GRM, 0.36" HOLE, PERF MESAVERDE, 8682'-8688' 4 SPF, 90* PH, 24 HOLES. 8583'-8587' 4 SPF, 90* PH, 16 HOLES. [40 HOLES] POOH SWIFN.
11/3/2009	-							

**RECEIVED** November 16, 2009

# US ROCKIES REGION

## Operation Summary Report

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH		Site: NBU 922-36G PAD	Rig Name No:
Event: COMPLETION		Start Date: 10/30/2009	End Date: 11/11/2009
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/O/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:30	10.25	COMP	36	E	P		<p>FRAC STG #1] MESAVERDE 8583'-8688' [40 HOLES]</p> <p>WHP=469#, BRK DN PERFS @ 5142#, INJ PSI=4900#, INJT RT=51, ISIP=2544#, FG=73, PUMP 833 BBLS SLK WTR W/ 22785# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2783#, FG=76, AR=51.1, AP=4875#, MR=51.6, MP=6284#, NPI=239#, 40/40 CALC PERFS OPEN. 100%</p> <p>STG #2] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8436', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 8402'-8406' 4 SPF, 90* PH, 16 HOLES. 8387'-8389' 4 SPF, 90* PH, 6 HOLES. 8354'-8356' 4 SPF, 90* PH, 6 HOLES. 8300'-8302' 4 SPF, 90* PH, 6 HOLES. 8352'-8254' 4 SPF, 90* PH, 6 HOLES. [40 HOLES]</p> <p>WHP=864#, BRK DN PERFS @ 6579#, INJ PSI=4485#, INJT RT=50, ISIP=2491#, FG=73, PUMP 998 BBLS SLK WTR W/ 35694# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2689#, FG=76, AR=50.3, AP=4050#, MR=50.5, MP=6828#, NPI=198#, 40/40 CALC PERFS OPEN. 100%</p> <p>STG #3] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8220', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. [ HOLES]</p> <p>WHP=#, BRK DN PERFS @ #, INJ PSI=#, INJT RT=, ISIP=#, FG=, PUMP BBLS SLK WTR W/ # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=#, FG=, AR=, AP=#, MR=, MP=#, NPI=#, /48 CALC PERFS OPEN.</p> <p>STG #4] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8220', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. [ HOLES]</p> <p>WHP=#, BRK DN PERFS @ #, INJ PSI=#, INJT RT=, ISIP=#, FG=, PUMP BBLS SLK WTR W/ # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=#, FG=, AR=, AP=#, MR=, MP=#, NPI=#, /48 CALC PERFS OPEN.</p> <p>STG #5] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8220', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. [ HOLES]</p>
11/4/2009	7:00 - 7:15	0.25	COMP	48		P		HSM,

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**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH		Site: NBU 922-36G PAD	Rig Name No:
Event: COMPLETION		Start Date: 10/30/2009	End Date: 11/11/2009
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 18:00	10.75	COMP	36		P		<p>FRAC STG #3] MESAVERDE 8157'-8190' [40 HOLES]</p> <p>WHP=585#, BRK DN PERFS @ 3254#, INJ PS=50#, INJT RT=4300, ISIP=1840#, FG=66, PUMP 959 BBLS SLK WTR W/ 34013# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2748#, FG=.77, AR=50.3, AP=4250#, MR=50.5, MP=6046#, NPI=908#, 36/40 CALC PERFS OPEN. 90%</p> <p>STG #4] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8042', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 8008'-8012' 4 SPF, 90° PH, 16 HOLES 7966'-7970' 3 SPF, 120° PH, 12 HOLES. 7902'-7904' 3 SPF, 120° PH, 6 HOLES. 7867'-7870' 3 SPF, 120° PH, 9 HOLES. [43 HOLES]</p> <p>WHP=195#, BRK DN PERFS @ 4834#, INJ PS=4200#, INJT RT=50, ISIP=1905#, FG=67, PUMP 1055 BBLS SLK WTR W/ 40870# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2333#, FG=.73, AR=51, AP=3751#, MR=51.5, MP=5462#, NPI=428#, 40/43 CALC PERFS OPEN.</p> <p>STG #5] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 7826', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7794'-7796' 3 SPF, 120° PH, 6 HOLES. 7728'-7730' 4 SPF, 90° PH, 8 HOLES. 7626'-7628' 4 SPF, 90° PH, 8 HOLES. 7572'-7576' 4 SPF, 90° PH, 16 HOLES. 7506'-7508' 3 SPF, 120° PH, 6 HOLES. [44 HOLES]</p> <p>WHP=1740#, BRK DN PERFS @ 3935#, INJ PS=4090#, INJT RT=50, ISIP=2083#, FG=67, PUMP 1673 BBLS SLK WTR W/ 66025# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2274#, FG=.76, AR=51.1, AP=3600#, MR=52.2, MP=5698#, NPI=191#, 44/44 CALC PERFS OPEN. 100%</p> <p>STG #6] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 7436', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7404'-7406' 4 SPF, 90° PH, 8 HOLES. 7392'-7394' 4 SPF, 90° PH, 8 HOLES. 7367'-7370' 4 SPF, 90° PH, 12 HOLES. 7288'-7292' 4 SPF, 90° PH, 16 HOLES. [44 HOLES] HSM,</p>
11/5/2009	7:00 - 7:15	0.25	COMP	48		P		

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# US ROCKIES REGION

## Operation Summary Report

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009		Spud Date: 8/3/2009	
Project: UTAH-UINTAH		Site: NBU 922-36G PAD		Rig Name No:	
Event: COMPLETION		Start Date: 10/30/2009		End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)			UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	36	E	P		<p>FRAC STG #6] MESAVERDE 7288'-7406' [44 HOLES</p> <p>WHP=1530#, BRK DN PERFS @ 3100#, INJ PSI=3850#, INJT RT=51, ISIP=1497#, FG=.64, PUMP 1430 BBLS SLK WTR W/ 55963# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2339#, FG=.75, AR=51.1, AP=3476#, MR=51.8, MP=4761#, NPI=842#, 37/44 CALC PERFS OPEN. 84%</p> <p>STG #7] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 7224', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7190'-7194' 4 SPF, 90* PH, 16 HOLES. 7148'-7150' 4 SPF, 90* PH, 8 HOLES. 7120'-7122' 4 SPF, 90* PH, 8 HOLES. 7046'-7048' 4 SPF, 90* PH, 8 HOLES. [40 HOLES]</p> <p>WHP=1603#, BRK DN PERFS @ 2603#, INJ PSI=4600#, INJT RT=51, ISIP=1953#, FG=.71, PUMP 944 BBLS SLK WTR W/ 36014# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2387#, FG=.77, AR=51.5, AP=4118#, MR=51.7, MP=5341#, NPI=434#, 30/40 CALC PERFS OPEN. 75%</p> <p>STG #8] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 6978', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 6944'-6948' 4 SPF, 90* PH, 16 HOLES. 6896'-6898' 3 SPF, 120* PH, 6 HOLES. 6856'-6860' 3 SPF, 120* PH, 12 HOLES. 6804'-6806' 4 SPF, 90* PH, 8 HOLES. [42 HOLES]</p> <p>WHP=0#, BRK DN PERFS @ 2627#, INJ PSI=3485#, INJT RT=50, ISIP=1189#, FG=.61, PUMP 3156 BBLS SLK WTR W/ 126320# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2505#, FG=.80, AR=52.7, AP=3710#, MR=54.6, MP=5792#, NPI=1316#, 34/42 CALC PERFS OPEN. 81%</p> <p>STG #9] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 6788', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 6754'-6758' 4 SPF, 90* PH, 16 HOLES. 6710'-6712' 4 SPF, 90* PH, 8 HOLES. 6604'-6606' 4 SPF, 90* PH, 8 HOLES. 6540'-6542' 4 SPF, 90* PH, 8 HOLES. [40 HOLES]</p> <p>WHP=1617# BRK DN PERFS @ 2402#, INJ PSI=3600#, INJ RT=53, ISIP=2183#, FG=.76, PUMP 998 BBLS SLK WTR W/ 38094# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2256#, FG=.77, AR=52.4, AP=3509#, MR=53.3, MP=4613#, NPI=73#, 24/40 CALC PERFS OPEN 60%</p> <p>P/U HALIBURTON 8K CBP FOR KILL PLUG &amp; SET @ 6490' SWI. MIRU, ND FRAC VALVE, NU BOP'S SDFN DRILLING PLUGS</p>
11/10/2009	13:00 -		COMP	44		P		
11/11/2009	7:00 - 7:30	0.50	COMP	48		P		

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**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009		Spud Date: 8/3/2009	
Project: UTAH-UINTAH		Site: NBU 922-36G PAD			Rig Name No:
Event: COMPLETION		Start Date: 10/30/2009		End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)			UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 19:30	12.00	COMP	44		P		RIH TO PLUG#1 @ 6490' RU PWR SWIVIL, DRILL PLUGS. PLUG #1 6490' 10' SAND 10 MIN 0# KICK PLUG #2 6788' 50' SAND 10 MIN 200# KICK PLUG #3 6978' 30' SAND 5 MIN 500# KICK PLUG #4 7224' 30' sand 8 min 400# KICK PLUG #5 7436' 40' sand 5 min 600# KICK PLUG #6 7826' 30' SAND 5 MIN 100# KICK PLUG #7 8042' 30' SAND 5 MIN 0# KICK PLUG #8 8220' 30' SAND 10 MIN 1000# KICK PLUG #9 8436' 30' SAND 15 MIN 1000# KICK RIH TO 8823' CLEAN OUT 87' SAND TO PBTD, CIRC BTMS UP, LAY DWN 20 JTS TO 8227'. LAND TBG @ 8227'. 265 JTS, EOT 8227', XN SN 1.875, ND BOP'S, NUWH. PUMP OFF BIT SUB. TURN TO FLOW BACK @ 7:00PM
11/12/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1950#, 20/64" CK, 55 BWPH, HEAVY SAND, LIGHT GAS TTL BBLS RECOVERED: 2775 BBLS LEFT TO RECOVER: 8633
	12:15 -		PROD	50				WELL TURNED TO SALE @ 1215 HR ON 11/12/09 - FTP 1850#, CP 2950#, 1150 MCFD, 45 BWPD, 18/64 CK
11/13/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2975#, TP 2250#, 18/64" CK, 35 BWPH, HEAVY SAND, - GAS TTL BBLS RECOVERED: 3795 BBLS LEFT TO RECOVER: 7613
11/14/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2675#, TP 1900#, 18/64" CK, 30 BWPH, MEDIUM SAND, - GAS TTL BBLS RECOVERED: 4605 BBLS LEFT TO RECOVER: 6803
11/15/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2575#, TP 1825#, 18/64" CK, 25 BWPH, MEDIUM SAND, - GAS TTL BBLS RECOVERED: 5300 BBLS LEFT TO RECOVER: 6108
11/16/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2500#, TP 1800#, 18/64" CK, 20 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 5870 BBLS LEFT TO RECOVER: 5538

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STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8  
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22650
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR: KERR McGEE OIL & GAS ONSHORE LP		7. UNIT or CA AGREEMENT NAME
3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217		8. WELL NAME and NUMBER: NBU 922-36H2AS
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: SWNE 1829 FNL & 1501 FEL AT TOP PRODUCING INTERVAL REPORTED BELOW: SENE 1359 FNL & 701 FEL SEC.36-9S-22E AT TOTAL DEPTH: SENE 1376 FNL & 682 FEL SEC.36-9S-22E		9. API NUMBER: 4304750392
PHONE NUMBER: (720) 929-6100		10. FIELD AND POOL, OR WILDCAT NATURAL BUTTES
11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNE 36 9S 22E		12. COUNTY UINTAH
13. STATE UTAH		

14. DATE SPURRED: 7/31/2009	15. DATE T.D. REACHED: 9/11/2009	16. DATE COMPLETED: 11/12/2009	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 4961' GL
18. TOTAL DEPTH: MD 8,884 TVD 8,760 8741	19. PLUG BACK T.D.: MD 8,817 TVD 8674	20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE MD PLUG SET: TVD
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) ACOUSTIC CBL-GR-BHV-ACRT/SDL/DSN			23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)	

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
12 1/4"	9 5/8 J-55	36#		2,083		550			
7 7/8"	4 1/2 I-80	11.6#		8,861		1865			

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,227							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	6,540	8,688			6,540 8,688	0.36	373	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6,540-8,688	PMP 12,046 BBLs SLICK H2O & 455,778 LBS 30/50 SD.

29. ENCLOSED ATTACHMENTS:

- ☐ ELECTRICAL/MECHANICAL LOGS  
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION

- ☐ GEOLOGIC REPORT  
☐ CORE ANALYSIS

- ☐ DST REPORT  
☒ DIRECTIONAL SURVEY  
☐ OTHER: \_\_\_\_\_

30. WELL STATUS:

PROD

## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 11/12/2009	TEST DATE: 11/30/2009	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF: 2,740	WATER – BBL: 500	PROD. METHOD: FLOWING
CHOKE SIZE: 18/64	TBG. PRESS. 1,308	CSG. PRESS. 1,751	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS: PROD

## INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,178				
MAHOGANY	1,830				
WASATCH	4,463	6,524			
MESAVERDE	6,572	8,750			

## 35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDY LYTLETITLE REGULATORY ANALYSTSIGNATURE DATE 12/3/2009

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]	Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH	Site: NBU 922-36G PAD	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 7/21/2009	End Date: 9/12/2009
Active Datum: RKB @4,974.00ft (above Mean Sea Level)	UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
8/3/2009	12:00 - 14:30	2.50	MIRU	01	B	P		INSTALL AIR BOWL AND BOWIE LINE, RIG UP RIG, RIG UP COMPRESSOR AND BOOSTER.
	14:30 - 16:30	2.00	DRLPRO	02	A	P		P/U AIR SPUD 14:30 8/3/2009 AIR HAMMER AND DRILL 40'-170'. DRILL W/ AIR MIST.
	16:30 - 19:30	3.00	DRLPRO	05	A	P		TRIP OUT OF HOLE LD AIR HAMMER, P/U USED 2.25 BENT HOUSE MOTOR 7/8 LOBE 4 STAGE .16 RPM (26.5 HRS), M/U HC507Z 2ND RUN, P/U AND SCRIBE DIRECTIONAL TOOLS, P/U 8" ASSEMBLY
	19:30 - 21:00	1.50	DRLPRO	01	B	P		INSTALL RUBBER IN AIR BOWL.
	21:00 - 0:00	3.00	DRLPRO	02	D	P		RIG UP PUMPS, CHECK FOR LEAKS, PRE SPUD INSPECTIONS.
								DRILL SLIDE 170'- 370'. WOB 5-12K, RPM =40, GPM= 588, 94 DH RPMs.
8/4/2009	0:00 - 17:30	17.50	DRLSUR	02	D	P		DRILL SLIDE 370'- 2110' (1740',99'/HR) TD 17:30 8/04/2009 WOB 16-18K, RPM 40, MOT. RPM 114, GPM 714. LOSS CIRC 1570', ASSISTED CIRC W/ AIR BOOSTER.
	17:30 - 18:30	1.00	DRLSUR	04	A	P		CIRC AND CLEAN HOLE. TO RUN CSG.
	18:30 - 22:00	3.50	CSG	05	D	P		HOLD SAFETY MEETING AND LDDS, AND LD DIRECTIONAL TOOLS.
	22:00 - 0:00	2.00	CSG	11	A	P		RIG UP TO RUN CSG AND RAN 47 JTS OF 9-5/8" 36# J-55 LT&C . PUMP THROUGH CSG 500' AND 1500'.
8/5/2009	0:00 - 1:00	1.00	CSG	11	A	P		RUN 47 JTS OF 9-5/8" 36# J-55 LT&C CSG AND LAND 2074.55' KB, BAFFLE PLATE RAN INSIDE TOP OF SHOE JT 2030' KB.
	1:00 - 1:30	0.50	RDMO	01	E	P		RIG DOWN RIG AND MOVE OFF. RELEASE RIG 01:30 8/5/2009.
	1:30 - 6:00	4.50	CSG	15	A	P		HOLD SAFETY MEETING AND RIG UP PRO PETRO CEMENTERS AND PUMP FLUSH OF 150 BBLs OF H2O, PUMP 20 BBLs OF GEL WATER, PUMP 350 SX (71.6 BBLs) OF 15.8#, 1.15 YD, 5 GAL SKOF PREMIUM CEM.DROP PLUG ON FLY, LIFT OF 400 PSI, BUMP PLUG 900 PSI, FLOAT HELD. PUMP TOP OUT #1 100 SX (20 BBLs) OF 15.8#, 1.15 YD, 5 GAL/SK OF PREMIUM CEMENT, DOWN BACKSIDE. WAIT 2 HRS, PUMP 2ND TOP OUT OF 100 SX 15.8# 1.15 YD. 5 GAL/SK OF PREMIUM CEMENT DOWN BACK SIDE. CEMENT NOT RISING, WILL REDI MIX TO SURFACE.
9/4/2009	17:00 - 18:00	1.00	DRLPRO	01	A	P		PREP TO SKID RIG
	18:00 - 19:00	1.00	DRLPRO	01	C	P		SKID RIG
	19:00 - 22:30	3.50	DRLPRO	14	A	P		NU BOPE
	22:30 - 0:00	1.50	DRLPRO	15	A	P		TEST BOPE
9/5/2009	0:00 - 3:00	3.00	DRLPRO	15	A	P		TEST BOP- 250 LOW, 5000 HIGH, ANNULAR 250 LOW, 2500 HIGH
	3:00 - 4:30	1.50	DRLPRO	06	A	P		PU HTC Q506F BIT, NEW MUD MOTOR, DIR WORK
	4:30 - 6:00	1.50	DRLPRO	06	A	P		TIH W/ BHA, TAG CMT AT 2000'
	6:00 - 7:00	1.00	DRLPRO	01	B	P		RIG INSPECTION, INSTALL CELLAR COVER
	7:00 - 7:30	0.50	DRLPRO	02	F	P		DRILL OUT SHOE TRACK 2075, , DRILL AHEAD
	7:30 - 12:30	5.00	DRLPRO	02	D	P		DRILL & SLIDE 2075 TO 2306, WOB- 13-18, GPM-486, SPP ON/OFF BOTTOM-1460/1120, 300-500 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-8/5, MW-8.5, VIS-27

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009		Spud Date: 8/3/2009	
Project: UTAH-UINTAH		Site: NBU 922-36G PAD		Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLING		Start Date: 7/21/2009		End Date: 9/12/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/6/2009	12:30 - 13:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:00 - 0:00	11.00	DRLPRO	02	D	P		DRILL & SLIDE 2306 TO 3070, WOB- 13-18, GPM-486, SPP ON/OFF BOTTOM-1540/1190, 300-500 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-8/5, MW-8.5, VIS-27
	0:00 - 12:30	12.50	DRLPRO	02	D	P		DRILL & SLIDE 3070 - 4028, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1540/1190, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-8/5, MW-8.5, VIS-26
	12:30 - 13:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:00 - 0:00	11.00	DRLPRO	02	A	P		DRILL & SLIDE 4028 - 4930, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1730/1390, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/8, MW-8.4, VIS-26
	0:00 - 13:00	13.00	DRLPRO	02	D	P		DRILL & SLIDE 4930 - 6020, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1730/1390, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/7, MW-8.4, VIS-26
9/7/2009	13:00 - 13:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	13:30 - 22:30	9.00	DRLPRO	02	D	P		DRILL & SLIDE 6020 -6597 , WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-1790/1390, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/7, MW-8.5, VIS-26, STARTING TO EXPERIENCE SOLIDS PROBLEMS
	22:30 - 0:00	1.50	DRLPRO	05	A	P		CIRC AND MUD UP TO 9 PPG, 38 VIS
	0:00 - 11:30	11.50	DRLPRO	02	D	P		DRILL & SLIDE 6597 - 7198, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2130/2110, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/8, MW-10.0, VIS-26
	11:30 - 12:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:00 - 0:00	12.00	DRLPRO	02	D	P		DRILL & SLIDE 7198 - 7753, WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2130/2110, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-14/9, MW-10.0, VIS-26
9/8/2009	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL & SLIDE 7753 - 8194 , WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2540/2220, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-11/8, MW-10.8, VIS-47
	11:00 - 11:30	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	11:30 - 20:00	8.50	DRLPRO	02	D	P		DRILL & SLIDE 8194 - 8421 , WOB- 13-18, GPM-498, SPP ON/OFF BOTTOM-2540/2220, 200-300DIFF, RPM-130, TORQUE ON/OFF BOTTOM-14/10, MW-10.8, VIS-47, BIT QUIT
	20:00 - 21:00	1.00	DRLPRO	05	C	P		DRILLING OVER THE LAST HOUR
	21:00 - 0:00	3.00	DRLPRO	06	A	P		PUMP SWEEP, CIRC HOLE CLEAN
	0:00 - 10:00	10.00	DRLPRO	06	A	P		TRIP FOR BIT
9/10/2009	10:00 - 10:30	0.50	DRLPRO	07	A	P		TRIP FOR BIT, Q506F BIT WAS DBR
	10:30 - 11:30	1.00	DRLPRO	06	A	P		LUBRICATE RIG
	11:30 - 12:30	1.00	DRLPRO	03	D	P		TRIP FOR BIT
	12:30 - 22:00	9.50	DRLPRO	02	D	P		WASH AND REAM FROM 8104 TO 8421, LOST #1 GENERATOR, FAN HUB BEARINGS FAILED
	22:00 - 0:00	2.00	DRLPRO	08	A	Z		DRILL & SLIDE 8421 TO 8870 , WOB- 20-24, GPM-498, SPP ON/OFF BOTTOM-2540/2220, 358-490 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-14/10, MW-11.7, VIS-47, BGG-800-2800 W/ 3-5 FT FLARE, RAISING MW TO 12.0
								LOST #2 GENERATOR, FAN HUB BEARING FAILED, PARTS & MECHANICS DUE ON LOCATION 03:00-04:00

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH	Site: NBU 922-36G PAD		Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 7/21/2009		End Date: 9/12/2009
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
9/11/2009	0:00 - 6:30	6.50	DRLPRO	08	A	P		REPAIR GENERATOR
	6:30 - 7:00	0.50	DRLPRO	02	D	P		DRILL & SLIDE 8870 -8884, WOB- 20-24, GPM-498, SPP ON/OFF BOTTOM-2740/2520, 358-490 DIFF, RPM-130, TORQUE ON/OFF BOTTOM-16/10, MW-12.0, VIS-47, BGG-40-50
	7:00 - 8:00	1.00	DRLPRO	05	F	P		PUMP SWEEP, CIRC HOLE
	8:00 - 10:30	2.50	DRLPRO	06	E	P		10 STD SHORT TRIP
	10:30 - 11:30	1.00	DRLPRO	05	E	P		PUMP SWEEP, CIRC HOLE
	11:30 - 12:00	0.50	DRLPRO	07	A	P		LUBRICATE RIG
	12:00 - 14:30	2.50	DRLPRO	06	A	P		ROTATE & PUMP OUT,
	14:30 - 15:00	0.50	DRLPRO	06	A	P		POOH FOR LOGS
	15:00 - 15:30	0.50	DRLPRO	08	B	Z		CHANGE OUT IRON ROUGH NECK HYD RAM
	15:30 - 22:00	6.50	DRLPRO	06	A	P		POOH FOR LOGS
9/12/2009	22:00 - 0:00	2.00	DRLPRO	11	D	P		HOLD SAFETY MEETING, RU LOGGERS, RUN OPEN HOLE LOGS
	0:00 - 2:30	2.50	DRLPRO	11	D	P		RUN TRIPLE COMBO LOGS, BRIDGED OUT AT 6602, LOG UP FROM THERE
	2:30 - 4:00	1.50	DRLPRO	12	A	P		HOLD SAFETY MEETING, RU CASERS
	4:00 - 12:00	8.00	DRLPRO	12	C	P		RUN 209 JTS 4 1/2 11.6#, I-80 BTC CSG, WASH THRU BRIDGE 8' AT 6600, TIH, RUN INTO TIGHT SPOT AT 8140, CSG HUNG UP, KICK PUMPS IN AND GET MOVEMENT DOWN, CAN NOT POOH, WASH DOWN 12' FALL THRU, STILL CAN NOT MOVE UP, TIH TO BOTTOM, PU 20' MARKER JT AND LAND CSG W/ SHOE AT 8866
	12:00 - 13:30	1.50	DRLPRO	05	D	P		CIRC OUT TRIP GAS, CIR HOLE
	13:30 - 16:00	2.50	DRLPRO	12	E	P		PUMP 40 BBLS SPACER, 565 SX 12.3 LEAD, 1300 SX 14.3 TAIL, DISPLACED W/ 137 BBLS WATER, BUMPED PLUG, FLOAT HELD, RETURNED 2 BBLS CMT TO SURFACE
	16:00 - 16:30	0.50	DRLPRO	01	E	P		ND & FLUSH BOP, FLOW LINE, 4" MUD LINES
	16:30 - 18:00	1.50	DRLPRO	01	E	P		SET SLIPS, -110K, CUT CSG, CLEAN PITS, RELEASE RIG AT 18:00

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009		Spud Date: 8/3/2009	
Project: UTAH-UINTAH		Site: NBU 922-36G PAD			Rig Name No:
Event: COMPLETION		Start Date: 10/30/2009		End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
10/30/2009	-							
11/2/2009	7:00 - 7:15	0.25	COMP	48		P		HSM, WIRE LINE
	7:15 - 16:00	8.75	COMP	36	E	P		N/U FRAC VALVES, P/T CSG TO 7500#, MIRU CASED HOLE SOLUTIONS, P/U RIIH W/ 3-3/8 EXPAND, 23 GRM, 0.36" HOLE, PERF MESAVERDE, 8682'-8688' 4 SPF, 90* PH, 24 HOLES. 8583'-8587' 4 SPF, 90* PH, 16 HOLES. [40 HOLES] POOH SWIFN.
11/3/2009	-							

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH	Site: NBU 922-36G PAD		Rig Name No:
Event: COMPLETION	Start Date: 10/30/2009	End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:30	10.25	COMP	36	E	P		<p>FRAC STG #1] MESAVERDE 8583'-8688' [40 HOLES]</p> <p>WHP=469#, BRK DN PERFS @ 5142#, INJ PSI=4900#, INJT RT=51, ISIP=2544#, FG=.73, PUMP 833 BBLS SLK WTR W/ 22785# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2783#, FG=.76, AR=51.1, AP=4875#, MR=51.6, MP=6284#, NPI=239#, 40/40 CALC PERFS OPEN. 100%</p> <p>STG #2] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8436', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 8402'-8406' 4 SPF, 90* PH, 16 HOLES. 8387'-8389' 4 SPF, 90* PH, 6 HOLES. 8354'-8356' 4 SPF, 90* PH, 6 HOLES. 8300'-8302' 4 SPF, 90* PH, 6 HOLES. 8352'-8254' 4 SPF, 90* PH, 6 HOLES. [40 HOLES]</p> <p>WHP=864#, BRK DN PERFS @ 6579#, INJ PSI=4485#, INJT RT=50, ISIP=2491#, FG=.73, PUMP 998 BBLS SLK WTR W/ 35694# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2689#, FG=.76, AR=50.3, AP=4050#, MR=50.5, MP=6828#, NPI=198#, 40/40 CALC PERFS OPEN. 100%</p> <p>STG #3] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8220', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. [ HOLES]</p> <p>WHP=#, BRK DN PERFS @ #, INJ PSI=#, INJT RT=, ISIP=#, FG=., PUMP BBLS SLK WTR W/ # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=#, FG=., AR=, AP=#, MR=, MP=#, NPI=#, /48 CALC PERFS OPEN.</p> <p>STG #4] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8220', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. [ HOLES]</p> <p>WHP=#, BRK DN PERFS @ #, INJ PSI=#, INJT RT=, ISIP=#, FG=., PUMP BBLS SLK WTR W/ # 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=#, FG=., AR=, AP=#, MR=, MP=#, NPI=#, /48 CALC PERFS OPEN.</p> <p>STG #5] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8220', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. 4 SPF, 90* PH, HOLES. [ HOLES]</p>
11/4/2009	7:00 - 7:15	0.25	COMP	48		P		HSM,

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH		Site: NBU 922-36G PAD	Rig Name No:
Event: COMPLETION		Start Date: 10/30/2009	End Date: 11/11/2009
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 18:00	10.75	COMP	36		P		<p>FRAC STG #3] MESAVERDE 8157'-8190' [40 HOLES]</p> <p>WHP=585#, BRK DN PERFS @ 3254#, INJ PSI=50#, INJT RT=4300, ISIP=1840#, FG=.66, PUMP 959 BBLS SLK WTR W/ 34013# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2748#, FG=.77, AR=50.3, AP=4250#, MR=50.5, MP=6046#, NPI=908#, 36/40 CALC PERFS OPEN. 90%</p> <p>STG #4] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 8042', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 8008'-8012' 4 SPF, 90* PH, 16 HOLES 7966'-7970' 3 SPF, 120* PH, 12 HOLES. 7902'-7904' 3 SPF, 120* PH, 6 HOLES. 7867'-7870' 3 SPF, 120* PH, 9 HOLES. [43 HOLES]</p> <p>WHP=195#, BRK DN PERFS @ 4834#, INJ PSI=4200#, INJT RT=50, ISIP=1905#, FG=.67, PUMP 1055 BBLS SLK WTR W/ 40870# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2333#, FG=.73, AR=51, AP=3751#, MR=51.5, MP=5462#, NPI=428#, 40/43 CALC PERFS OPEN.</p> <p>STG #5] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 7826', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7794'-7796' 3 SPF, 120* PH, 6 HOLES. 7728'-7730' 4 SPF, 90* PH, 8 HOLES. 7626'-7628' 4 SPF, 90* PH, 8 HOLES. 7572'-7576' 4 SPF, 90* PH, 16 HOLES. 7506'-7508' 3 SPF, 120* PH, 6 HOLES. [44 HOLES]</p> <p>WHP=1740#, BRK DN PERFS @ 3935#, INJ PSI=4090#, INJT RT=50, ISIP=2083#, FG=.67, PUMP 1673 BBLS SLK WTR W/ 66025# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2274#, FG=.76, AR=51.1, AP=3600#, MR=52.2, MP=5698#, NPI=191#, 44/44 CALC PERFS OPEN. 100%</p> <p>STG #6] P/U RIH W/ HALIBURTON 8K CBP &amp; PERF GUN, SET CBP @ 7436', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7404'-7406' 4 SPF, 90* PH, 8 HOLES. 7392'-7394' 4 SPF, 90* PH, 8 HOLES. 7367'-7370' 4 SPF, 90* PH, 12 HOLES. 7288'-7292' 4 SPF, 90* PH, 16 HOLES. [44 HOLES]</p>
11/5/2009	7:00 - 7:15	0.25	COMP	48		P		HSM,

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009	Spud Date: 8/3/2009
Project: UTAH-UINTAH	Site: NBU 922-36G PAD		Rig Name No:
Event: COMPLETION	Start Date: 10/30/2009	End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/O/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	36	E	P		FRAC STG #6] MESAVERDE 7288'-7406' [44 HOLES  WHP=1530#, BRK DN PERFS @ 3100#, INJ PS=3850#, INJT RT=51, ISIP=1497#, FG=.64, PUMP 1430 BBLS SLK WTR W/ 55963# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2339#, FG=.75, AR=51.1, AP=3476#, MR=51.8, MP=4761#, NPI=842#, 37/44 CALC PERFS OPEN. 84%  STG #7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 7224', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7190'-7194' 4 SPF, 90* PH, 16 HOLES. 7148'-7150' 4 SPF, 90* PH, 8 HOLES. 7120'-7122' 4 SPF, 90* PH, 8 HOLES. 7046'-7048' 4 SPF, 90* PH, 8 HOLES. [40 HOLES]  WHP=1603#, BRK DN PERFS @ 2603#, INJ PS=4600#, INJT RT=51, ISIP=1953#, FG=.71, PUMP 944 BBLS SLK WTR W/ 36014# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2387#, FG=.77, AR=51.5, AP=4118#, MR=51.7, MP=5341#, NPI=434#, 30/40 CALC PERFS OPEN. 75%  STG #8] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 6978', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 6944'-6948' 4 SPF, 90* PH, 16 HOLES. 6896'-6898' 3 SPF, 120* PH, 6 HOLES. 6856'-6860' 3 SPF, 120* PH, 12 HOLES. 6804'-6806' 4 SPF, 90* PH, 8 HOLES. [42 HOLES]  WHP=0#, BRK DN PERFS @ 2627#, INJ PS=3485#, INJT RT=50, ISIP=1189#, FG=.61, PUMP 3156 BBLS SLK WTR W/ 126320# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2505#, FG=.80, AR=52.7, AP=3710#, MR=54.6, MP=5792#, NPI=1316#, 34/42 CALC PERFS OPEN. 81%  STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @ 6788', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 6754'-6758' 4 SPF, 90* PH, 16 HOLES. 6710'-6712' 4 SPF, 90* PH, 8 HOLES. 6604'-6606' 4 SPF, 90* PH, 8 HOLES. 6540'-6542' 4 SPF, 90* PH, 8 HOLES. [40 HOLES]  WHP=1617# BRK DN PERFS @ 2402#, INJ PSI=3600#, INJ RT=53, ISIP=2183#, FG=.76, PUMP 998 BBLS SLK WTR W/ 38094# 30/50 MESH W/ 5000# RESIN COAT IN TAIL, ISIP=2256#, FG=.77, AR=52.4, AP=3509#, MR=53.3, MP=4613#, NPI=73#, 24/40 CALC PERFS OPEN 60%  P/U HALIBURTON 8K CBP FOR KILL PLUG & SET @ 6490' SWI. MIRU, ND FRAC VALVE, NU BOP'S SDFN DRILLING PLUGS
11/10/2009	13:00 -		COMP	44		P		
11/11/2009	7:00 - 7:30	0.50	COMP	48		P		

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]		Spud Conductor: 7/31/2009		Spud Date: 8/3/2009	
Project: UTAH-UINTAH		Site: NBU 922-36G PAD		Rig Name No:	
Event: COMPLETION		Start Date: 10/30/2009		End Date: 11/11/2009	
Active Datum: RKB @4,974.00ft (above Mean Sea Level)		UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 19:30	12.00	COMP	44		P		RIH TO PLUG#1 @ 6490' RU PWR SWIVIL, DRILL PLUGS. PLUG #1 6490' 10' SAND 10 MIN 0# KICK PLUG #2 6788' 50' SAND 10 MIN 200# KICK PLUG #3 6978' 30' SAND 5 MIN 500# KICK PLUG #4 7224' 30' sand 8 min 400# KICK PLUG #5 7436' 40' sand 5 min 600# KICK PLUG #6 7826' 30' SAND 5 MIN 100# KICK PLUG #7 8042' 30' SAND 5 MIN 0# KICK PLUG #8 8220' 30' SAND 10 MIN 1000# KICK PLUG #9 8436' 30' SAND 15 MIN 1000# KICK RIH TO 8823' CLEAN OUT 87' SAND TO PBTD, CIRC BTMS UP, LAY DWN 20 JTS TO 8227'. LAND TBG @ 8227'. 265 JTS, EOT 8227', XN SN 1.875, ND BOP'S, NUWH. PUMP OFF BIT SUB. TURN TO FLOW BACK @ 7:00PM
11/12/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2400#, TP 1950#, 20/64" CK, 55 BWPH, HEAVY SAND, LIGHT GAS TTL BBLS RECOVERED: 2775 BBLS LEFT TO RECOVER: 8633
	12:15 -		PROD	50				WELL TURNED TO SALE @ 1215 HR ON 11/12/09 - FTP 1850#, CP 2950#, 1150 MCFD, 45 BWPD, 18/64 CK
11/13/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2975#, TP 2250#, 18/64" CK, 35 BWPH, HEAVY SAND, - GAS TTL BBLS RECOVERED: 3795 BBLS LEFT TO RECOVER: 7613
11/14/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2675#, TP 1900#, 18/64" CK, 30 BWPH, MEDIUM SAND, - GAS TTL BBLS RECOVERED: 4605 BBLS LEFT TO RECOVER: 6803
11/15/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2575#, TP 1825#, 18/64" CK, 25 BWPH, MEDIUM SAND, - GAS TTL BBLS RECOVERED: 5300 BBLS LEFT TO RECOVER: 6108
11/16/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2500#, TP 1800#, 18/64" CK, 20 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 5870 BBLS LEFT TO RECOVER: 5538
11/17/2009	7:00 -			33	A			7 AM FLBK REPORT: CP 2450#, TP 1750#, 18/64" CK, 15 BWPH, CLEAN SAND, - GAS TTL BBLS RECOVERED: 6230 BBLS LEFT TO RECOVER: 5178
11/30/2009	7:00 -		PROD	50				WELL IP'D 11/30/09 - 2740 MCFD, 500 BWPD, CP 1751#, FTP 1308#, CK 18/64", LP 97#, 24 HRS



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**NBU 922-36G PAD**

**NBU 922-36H2AS**

**NBU 922-36H2AS**

**Survey: FINAL**

## **Standard Survey Report**

**15 September, 2009**



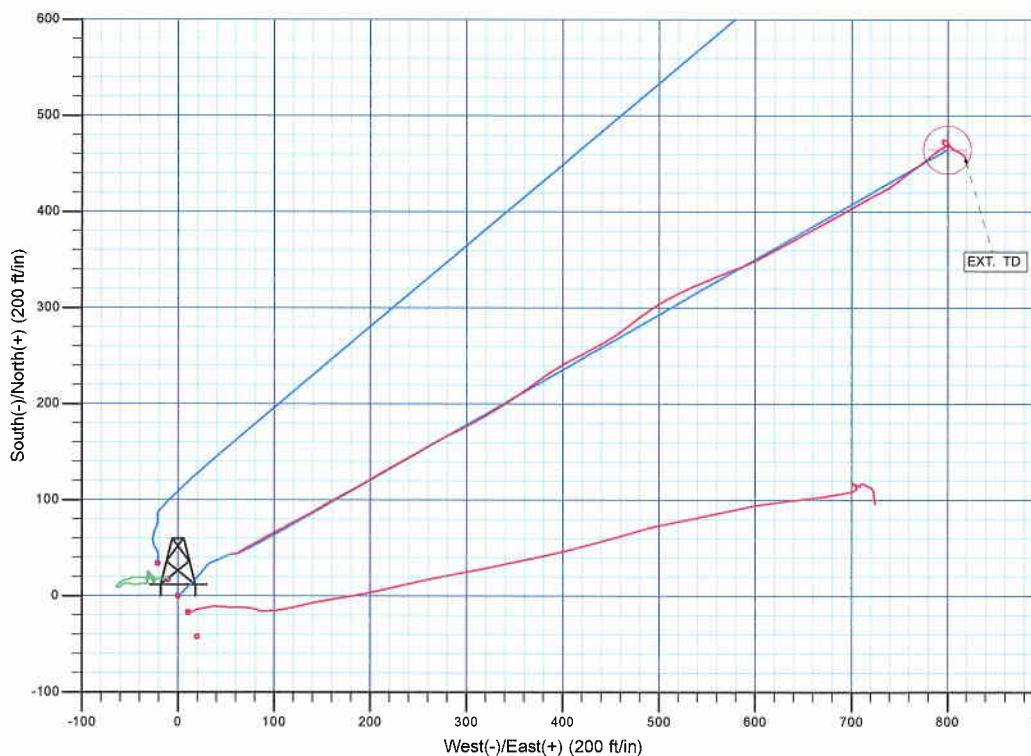
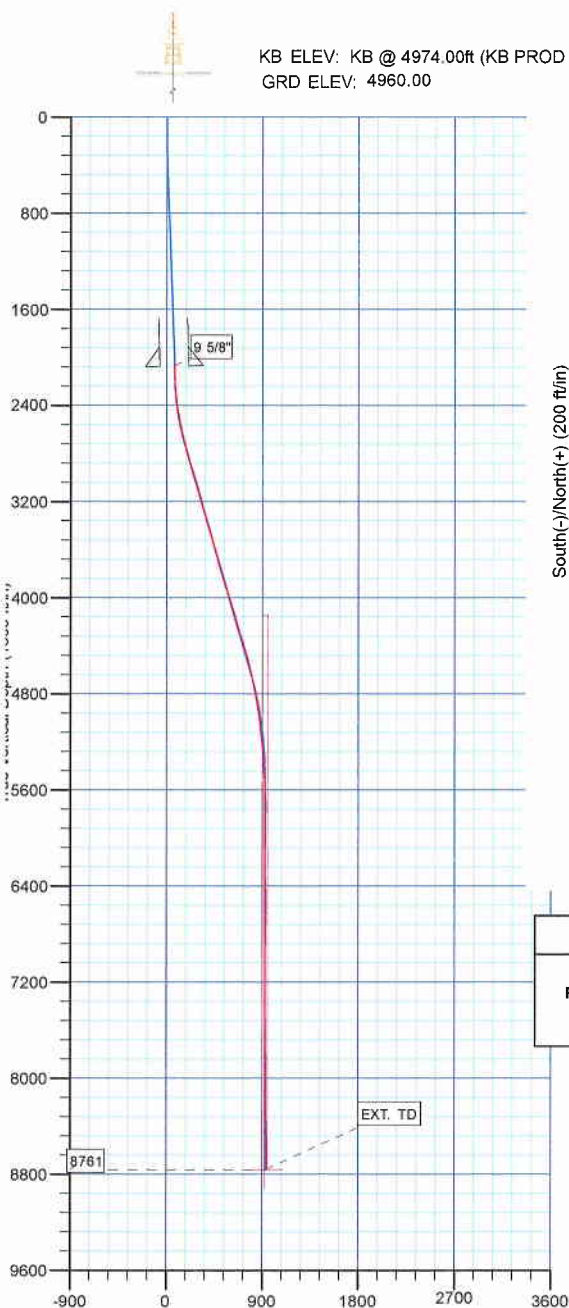


WELL DETAILS: NBU 922-36H2AS						
+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude
0.00	0.00	14528245.93	2093153.76	4960.00	39° 59' 41.180 N	109° 23' 0.886 W
Slot						

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4141.00	4225.98	WASATCH
7479.00	7603.18	MESAVERDE

SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target	
2067.00	1.59	85.24	2065.51	43.71	56.53	0.00	0.00	70.84		
2175.00	1.59	85.24	2173.47	43.96	59.52	0.00	0.00	73.55		
2728.54	18.03	60.16	2717.12	87.54	142.07	3.00	-27.33	166.82		
4722.53	18.03	60.16	4613.16	394.70	677.49	0.00	0.00	784.08		
5624.18	0.00	0.00	5500.00	464.73	799.55	2.00	180.00	924.80		
8884.18	0.00	0.00	8760.00	464.73	799.55	0.00	0.00	924.80	PBHL_922-36H2AS	

CASING DETAILS			
TVD	MD	Name	Size
2073.51	2075.00	9 5/8"	9.62



WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL_922-36H2AS	8760.00	464.73	799.55	14528275.09	2093944.75	39° 59' 45.773 N	109° 22' 50.611 W	Circle (Radius: 25.00)	

**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
**Site:** NBU 922-36G PAD  
**Well:** NBU 922-36H2AS  
**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

<b>Project</b>	UINTAH COUNTY, UTAH (nad 27),		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site	NBU 922-36G PAD, SECTION 36 T9S R22E				
Site Position:		Northing:	14,528,229.13 ft	Latitude:	39° 59' 41.012 N
From:	Lat/Long	Easting:	2,093,164.49 ft	Longitude:	109° 23' 0.752 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.04 °

Well	NBU 922-36H2AS					
Well Position	+N-S	0.00 ft	Northing:	14,528,245.93 ft	Latitude:	39° 59' 41.180 N
	+E-W	0.00 ft	Easting:	2,093,153.76 ft	Longitude:	109° 23' 0.886 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,960.00 ft

<b>Wellbore</b>	NBU 922-36H2AS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2009	8/31/2009	11.28	65.95	52,531

Design	NBU 922-36H2AS ACTUAL				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	59.36	

<b>Survey Program</b>	<b>Date</b> 9/15/2009				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
177.00	2,067.00	SCIENTIFIC MWD SURVEY (NBU 922-36	MWD	MWD - Standard	
2,164.00	8,884.00	WFT MWD SVY (NBU 922-36H2AS)	MWD	MWD - Standard	

<b>Survey</b>									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,067.00	1.59	85.24	2,065.51	43.71	56.53	70.92	0.00	0.00	0.00
2,164.00	1.92	83.17	2,162.47	44.02	59.49	73.62	0.35	0.34	-2.13
2,176.00	2.25	76.60	2,174.46	44.10	59.92	74.03	3.39	2.75	-54.75
2,188.00	2.49	75.63	2,186.45	44.22	60.40	74.50	2.03	2.00	-8.08
2,198.00	2.83	68.21	2,196.44	44.36	60.84	74.95	4.83	3.40	-74.20
2,208.00	3.27	67.29	2,206.42	44.56	61.33	75.48	4.43	4.40	-9.20
2,218.00	3.46	66.59	2,216.41	44.79	61.87	76.06	1.94	1.90	-7.00
2,228.00	3.91	63.03	2,226.38	45.07	62.45	76.70	5.05	4.50	-35.60
2,238.00	4.07	62.25	2,236.36	45.39	63.07	77.40	1.69	1.60	-7.80
2,254.00	4.49	60.64	2,252.32	45.96	64.12	78.59	2.73	2.62	-10.06
2,264.00	4.71	57.44	2,262.28	46.37	64.81	79.39	3.38	2.20	-32.00
2,288.00	5.35	58.60	2,286.19	47.48	66.59	81.49	2.70	2.67	4.83

**Company:** ANADARKO PETROLEUM CORP.  
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**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,300.00	5.69	58.86	2,298.14	48.08	67.58	82.65	2.84	2.83	2.17
2,345.00	6.58	61.00	2,342.88	50.49	71.74	87.46	2.04	1.98	4.76
2,375.00	7.73	63.25	2,372.64	52.23	75.05	91.19	3.94	3.83	7.50
2,405.00	9.05	61.90	2,402.32	54.25	78.93	95.56	4.45	4.40	-4.50
2,436.00	9.63	61.69	2,432.91	56.63	83.36	100.58	1.87	1.87	-0.68
2,466.00	10.80	60.02	2,462.43	59.22	88.01	105.90	4.02	3.90	-5.57
2,496.00	12.13	59.71	2,491.84	62.22	93.16	111.87	4.44	4.43	-1.03
2,526.00	12.74	61.17	2,521.13	65.40	98.78	118.32	2.29	2.03	4.87
2,556.00	13.33	61.79	2,550.36	68.63	104.73	125.09	2.02	1.97	2.07
2,586.00	13.46	61.89	2,579.54	71.91	110.86	132.03	0.44	0.43	0.33
2,617.00	13.66	62.44	2,609.68	75.30	117.28	139.29	0.77	0.65	1.77
2,662.00	14.99	63.34	2,653.28	80.37	127.20	150.40	3.00	2.96	2.00
2,707.00	15.29	60.16	2,696.72	85.94	137.54	162.14	1.96	0.67	-7.07
2,753.00	15.81	58.94	2,741.03	92.19	148.17	174.47	1.34	1.13	-2.65
2,798.00	16.73	60.86	2,784.23	98.51	159.08	187.07	2.37	2.04	4.27
2,843.00	18.99	61.78	2,827.06	105.12	171.19	200.87	5.06	5.02	2.04
2,888.00	20.03	61.56	2,869.47	112.25	184.42	215.88	2.32	2.31	-0.49
2,934.00	19.87	59.70	2,912.71	119.95	198.10	231.57	1.42	-0.35	-4.04
2,979.00	19.31	59.41	2,955.11	127.60	211.11	246.66	1.26	-1.24	-0.64
3,024.00	19.19	60.53	2,997.59	135.02	223.95	261.49	0.86	-0.27	2.49
3,070.00	18.56	60.66	3,041.12	142.33	236.91	276.37	1.37	-1.37	0.28
3,115.00	17.25	60.03	3,083.94	149.17	248.94	290.20	2.94	-2.91	-1.40
3,160.00	16.94	59.78	3,126.95	155.80	260.38	303.43	0.71	-0.69	-0.56
3,206.00	17.00	61.78	3,170.95	162.35	272.10	316.85	1.28	0.13	4.35
3,251.00	17.00	63.41	3,213.98	168.41	283.78	329.99	1.06	0.00	3.62
3,296.00	16.25	63.53	3,257.10	174.16	295.30	342.83	1.67	-1.67	0.27
3,342.00	16.88	61.28	3,301.19	180.24	306.91	355.92	1.95	1.37	-4.89
3,387.00	17.94	59.66	3,344.13	186.88	318.63	369.38	2.59	2.36	-3.60
3,432.00	18.31	59.03	3,386.90	194.02	330.67	383.38	0.93	0.82	-1.40
3,477.00	18.94	57.16	3,429.54	201.62	342.86	397.75	1.93	1.40	-4.16
3,523.00	18.81	54.41	3,473.07	209.98	355.17	412.60	1.95	-0.28	-5.98
3,568.00	18.63	54.16	3,515.69	218.41	366.89	426.98	0.44	-0.40	-0.56
3,613.00	17.75	54.66	3,558.44	226.59	378.32	440.98	1.99	-1.96	1.11
3,659.00	17.44	56.66	3,602.29	234.43	389.79	454.85	1.48	-0.67	4.35
3,704.00	16.75	60.91	3,645.30	241.29	401.10	468.07	3.17	-1.53	9.44
3,749.00	16.63	62.28	3,688.41	247.44	412.46	480.98	0.91	-0.27	3.04
3,794.00	17.19	62.28	3,731.46	253.53	424.05	494.05	1.24	1.24	0.00
3,840.00	18.94	61.41	3,775.19	260.26	436.62	508.30	3.85	3.80	-1.89
3,885.00	19.31	57.41	3,817.71	267.76	449.30	523.04	3.03	0.82	-8.89
3,930.00	19.19	53.66	3,860.19	276.16	461.53	537.84	2.76	-0.27	-8.33
3,976.00	18.38	52.03	3,903.74	285.10	473.34	552.55	2.10	-1.76	-3.54
4,021.00	19.69	54.78	3,946.28	293.83	485.13	567.15	3.53	2.91	6.11
4,066.00	19.81	57.78	3,988.64	302.27	497.77	582.33	2.27	0.27	6.67
4,111.00	20.00	61.53	4,030.95	310.01	510.99	597.64	2.87	0.42	8.33
4,157.00	19.56	63.53	4,074.24	317.19	524.79	613.18	1.75	-0.96	4.35
4,202.00	18.81	67.03	4,116.74	323.38	538.22	627.88	3.05	-1.67	7.78
4,247.00	17.94	67.28	4,159.44	328.89	551.29	641.94	1.94	-1.93	0.56
4,293.00	18.25	68.66	4,203.17	334.24	564.53	656.06	1.15	0.67	3.00
4,338.00	18.44	68.78	4,245.88	339.38	577.73	670.04	0.43	0.42	0.27
4,383.00	18.69	66.41	4,288.54	344.85	590.97	684.21	1.77	0.56	-5.27
4,428.00	18.38	63.03	4,331.21	350.95	603.90	698.45	2.48	-0.69	-7.51
4,474.00	19.06	60.78	4,374.77	357.90	616.92	713.20	2.16	1.48	-4.89
4,519.00	19.50	62.16	4,417.25	365.00	629.98	728.04	1.41	0.98	3.07
4,564.00	18.44	62.16	4,459.81	371.83	642.91	742.65	2.36	-2.36	0.00

**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
**Site:** NBU 922-36G PAD  
**Well:** NBU 922-36H2AS  
**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,610.00	16.44	61.03	4,503.69	378.38	655.04	756.43	4.41	-4.35	-2.46
4,655.00	15.75	60.91	4,546.93	384.43	665.95	768.90	1.54	-1.53	-0.27
4,700.00	15.31	61.03	4,590.28	390.28	676.48	780.94	0.98	-0.98	0.27
4,746.00	14.63	60.53	4,634.72	396.08	686.86	792.82	1.50	-1.48	-1.09
4,791.00	13.88	60.03	4,678.34	401.57	696.48	803.90	1.69	-1.67	-1.11
4,836.00	13.44	60.53	4,722.06	406.84	705.71	814.53	1.01	-0.98	1.11
4,882.00	12.88	60.66	4,766.85	411.98	714.83	825.00	1.22	-1.22	0.28
4,927.00	12.88	62.78	4,810.72	416.74	723.66	835.02	1.05	0.00	4.71
4,972.00	12.19	63.28	4,854.65	421.17	732.37	844.76	1.55	-1.53	1.11
5,018.00	10.00	56.66	4,899.79	425.55	740.04	853.60	5.50	-4.76	-14.39
5,063.00	9.38	51.28	4,944.15	429.99	746.17	861.13	2.44	-1.38	-11.96
5,108.00	9.06	52.66	4,988.57	434.43	751.85	868.28	0.86	-0.71	3.07
5,153.00	8.25	53.91	5,033.05	438.48	757.27	875.02	1.85	-1.80	2.78
5,199.00	7.31	53.41	5,078.63	442.17	762.29	881.21	2.05	-2.04	-1.09
5,244.00	7.25	53.53	5,123.27	445.56	766.87	886.88	0.14	-0.13	0.27
5,289.00	6.56	53.66	5,167.94	448.77	771.23	892.27	1.53	-1.53	0.29
5,334.00	5.88	50.91	5,212.67	451.75	775.09	897.10	1.65	-1.51	-6.11
5,380.00	5.31	52.66	5,258.46	454.53	778.61	901.55	1.29	-1.24	3.80
5,425.00	4.81	48.28	5,303.28	457.05	781.67	905.47	1.40	-1.11	-9.73
5,516.00	4.38	53.53	5,393.99	461.65	787.31	912.67	0.66	-0.47	5.77
5,606.00	3.75	55.78	5,483.76	465.35	792.51	919.03	0.72	-0.70	2.50
5,697.00	3.31	64.41	5,574.59	468.16	797.34	924.61	0.76	-0.48	9.48
5,787.00	1.56	74.03	5,664.50	469.62	800.86	928.39	1.99	-1.94	10.69
5,878.00	0.31	219.91	5,755.49	469.77	801.89	929.35	2.01	-1.37	160.31
5,968.00	0.63	208.03	5,845.49	469.15	801.51	928.70	0.37	0.36	-13.20
6,059.00	0.50	240.70	5,936.49	468.51	800.92	927.88	0.38	-0.14	35.90
6,150.00	0.50	230.91	6,027.48	468.06	800.27	927.09	0.09	0.00	-10.76
6,240.00	0.56	200.03	6,117.48	467.40	799.81	926.36	0.32	0.07	-34.31
6,331.00	1.25	343.41	6,208.47	467.94	799.38	926.26	1.90	0.76	157.56
6,421.00	0.75	350.66	6,298.46	469.46	799.00	926.71	0.57	-0.56	8.06
6,512.00	0.99	61.12	6,389.45	470.43	799.59	927.71	1.12	0.26	77.43
6,602.00	0.44	78.16	6,479.44	470.87	800.61	928.81	0.65	-0.61	18.93
6,693.00	1.44	344.41	6,570.43	472.05	800.65	929.44	1.68	1.10	-103.02
6,784.00	1.13	300.16	6,661.41	473.60	799.56	929.30	1.11	-0.34	-48.63
6,874.00	1.44	293.16	6,751.39	474.49	797.76	928.20	0.39	0.34	-7.78
6,965.00	0.88	286.90	6,842.37	475.14	796.04	927.05	0.63	-0.62	-6.88
7,055.00	0.44	241.16	6,932.37	475.18	795.07	926.24	0.73	-0.49	-50.82
7,146.00	0.69	206.16	7,023.36	474.52	794.53	925.43	0.46	0.27	-38.46
7,237.00	0.69	184.28	7,114.36	473.48	794.24	924.66	0.29	0.00	-24.04
7,327.00	1.44	160.91	7,204.34	471.87	794.57	924.12	0.95	0.83	-25.97
7,418.00	1.94	130.41	7,295.30	469.79	796.12	924.40	1.11	0.55	-33.52
7,508.00	0.44	81.16	7,385.28	468.86	797.62	925.21	1.87	-1.67	-54.72
7,599.00	0.63	53.03	7,476.28	469.21	798.37	926.03	0.35	0.21	-30.91
7,689.00	0.94	100.78	7,566.27	469.37	799.49	927.08	0.77	0.34	53.06
7,780.00	0.69	116.91	7,657.26	468.98	800.71	927.93	0.37	-0.27	17.73
7,871.00	0.56	119.16	7,748.25	468.52	801.59	928.45	0.15	-0.14	2.47
7,961.00	0.69	119.78	7,838.25	467.93	802.63	929.05	0.12	0.12	0.56
8,052.00	0.75	123.91	7,929.24	467.45	803.39	929.46	0.11	0.08	5.82
8,142.00	0.50	128.21	8,019.24	466.88	804.18	929.85	0.28	-0.28	4.78
8,233.00	0.94	140.53	8,110.23	466.06	804.97	930.11	0.51	0.48	13.54
8,323.00	1.44	124.28	8,200.21	464.85	806.37	930.70	0.66	0.56	-18.06
8,412.00	1.49	111.63	8,289.18	463.80	808.37	931.89	0.37	0.06	-14.21
8,503.00	1.66	115.63	8,380.15	462.79	810.66	933.34	0.22	0.19	4.40
8,593.00	2.07	123.84	8,470.10	461.32	813.19	934.77	0.54	0.46	9.12

**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
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**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,685.00	2.07	122.53	8,562.04	459.50	815.97	936.23	0.05	0.00	-1.42
8,774.00	2.13	156.89	8,650.98	457.12	817.97	936.74	1.40	0.07	38.61
8,830.00	2.09	160.69	8,706.94	455.20	818.72	936.40	0.26	-0.07	6.79
EXT. TD									
8,884.00	2.09	160.69	8,760.91	453.34	819.37	936.02	0.00	0.00	0.00

**Survey Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,884.00	8,760.91	453.34	819.37	EXT. TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



# **ANADARKO PETROLEUM CORP.**

**UINTAH COUNTY, UTAH (nad 27)**

**NBU 922-36G PAD**

**NBU 922-36H2AS**

**NBU 922-36H2AS**

**Survey: WFT MWD SVY**

## **Survey Report - Geographic**

**15 September, 2009**



**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
**Site:** NBU 922-36G PAD  
**Well:** NBU 922-36H2AS  
**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

<b>Project</b>	UINTAH COUNTY, UTAH (nad 27),		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site	NBU 922-36G PAD, SECTION 36 T9S R22E				
Site Position:		Northing:	14,528,229.13 ft	Latitude:	39° 59' 41.012 N
From:	Lat/Long	Easting:	2,093,164.49 ft	Longitude:	109° 23' 0.752 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	1.04 °

Well	NBU 922-36H2AS					
Well Position	+N/-S	0.00 ft	Northing:	14,528,245.93 ft	Latitude:	39° 59' 41.180 N
	+E/-W	0.00 ft	Easting:	2,093,153.76 ft	Longitude:	109° 23' 0.886 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,960.00 ft	

<b>Wellbore</b>	NBU 922-36H2AS				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2009	8/31/2009	11.28	65.95	52,531

<b>Design</b>	NBU 922-36H2AS ACTUAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	59.36	

<b>Survey Program</b>	<b>Date</b> 9/15/2009				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
177.00	2,067.00	SCIENTIFIC MWD SURVEY (NBU 922-36	MWD	MWD - Standard	
2,164.00	8,884.00	WFT MWD SVY (NBU 922-36H2AS)	MWD	MWD - Standard	

**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
**Site:** NBU 922-36G PAD  
**Well:** NBU 922-36H2AS  
**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
2,067.00	1.59	85.24	2,065.51	43.71	56.53	14,528,290.66	2,093,209.49	39° 59' 41.612 N	109° 23' 0.160 W
2,164.00	1.92	83.17	2,162.47	44.02	59.49	14,528,291.02	2,093,212.44	39° 59' 41.615 N	109° 23' 0.122 W
2,176.00	2.25	76.60	2,174.46	44.10	59.92	14,528,291.11	2,093,212.87	39° 59' 41.616 N	109° 23' 0.116 W
2,188.00	2.49	75.63	2,186.45	44.22	60.40	14,528,291.24	2,093,213.35	39° 59' 41.617 N	109° 23' 0.110 W
2,198.00	2.83	68.21	2,196.44	44.36	60.84	14,528,291.39	2,093,213.78	39° 59' 41.618 N	109° 23' 0.104 W
2,208.00	3.27	67.29	2,206.42	44.56	61.33	14,528,291.60	2,093,214.27	39° 59' 41.620 N	109° 23' 0.098 W
2,218.00	3.46	66.59	2,216.41	44.79	61.87	14,528,291.84	2,093,214.81	39° 59' 41.623 N	109° 23' 0.091 W
2,228.00	3.91	63.03	2,226.38	45.07	62.45	14,528,292.13	2,093,215.38	39° 59' 41.625 N	109° 23' 0.083 W
2,238.00	4.07	62.25	2,236.36	45.39	63.07	14,528,292.46	2,093,216.00	39° 59' 41.629 N	109° 23' 0.076 W
2,254.00	4.49	60.64	2,252.32	45.96	64.12	14,528,293.05	2,093,217.03	39° 59' 41.634 N	109° 23' 0.062 W
2,264.00	4.71	57.44	2,262.28	46.37	64.81	14,528,293.47	2,093,217.71	39° 59' 41.638 N	109° 23' 0.053 W
2,288.00	5.35	58.60	2,286.19	47.48	66.59	14,528,294.62	2,093,219.48	39° 59' 41.649 N	109° 23' 0.030 W
2,300.00	5.69	58.86	2,298.14	48.08	67.58	14,528,295.24	2,093,220.45	39° 59' 41.655 N	109° 23' 0.018 W
2,345.00	6.58	61.00	2,342.88	50.49	71.74	14,528,297.71	2,093,224.57	39° 59' 41.679 N	109° 22' 59.964 W
2,375.00	7.73	63.25	2,372.64	52.23	75.05	14,528,299.52	2,093,227.85	39° 59' 41.696 N	109° 22' 59.922 W
2,405.00	9.05	61.90	2,402.32	54.25	78.93	14,528,301.61	2,093,231.69	39° 59' 41.716 N	109° 22' 59.872 W
2,436.00	9.63	61.69	2,432.91	56.63	83.36	14,528,304.06	2,093,236.08	39° 59' 41.740 N	109° 22' 59.815 W
2,466.00	10.80	60.02	2,462.43	59.22	88.01	14,528,306.74	2,093,240.68	39° 59' 41.765 N	109° 22' 59.755 W
2,496.00	12.13	59.71	2,491.84	62.22	93.16	14,528,309.83	2,093,245.78	39° 59' 41.795 N	109° 22' 59.689 W
2,526.00	12.74	61.17	2,521.13	65.40	98.78	14,528,313.12	2,093,251.34	39° 59' 41.826 N	109° 22' 59.617 W
2,556.00	13.33	61.79	2,550.36	68.63	104.73	14,528,316.45	2,093,257.23	39° 59' 41.858 N	109° 22' 59.540 W
2,586.00	13.46	61.89	2,579.54	71.91	110.86	14,528,319.84	2,093,263.29	39° 59' 41.891 N	109° 22' 59.461 W
2,617.00	13.66	62.44	2,609.68	75.30	117.28	14,528,323.35	2,093,269.66	39° 59' 41.924 N	109° 22' 59.379 W
2,662.00	14.99	63.34	2,653.28	80.37	127.20	14,528,328.60	2,093,279.48	39° 59' 41.974 N	109° 22' 59.251 W
2,707.00	15.29	60.16	2,696.72	85.94	137.54	14,528,334.35	2,093,289.72	39° 59' 42.029 N	109° 22' 59.118 W
2,753.00	15.81	58.94	2,741.03	92.19	148.17	14,528,340.79	2,093,300.24	39° 59' 42.091 N	109° 22' 58.982 W
2,798.00	16.73	60.86	2,784.23	98.51	159.08	14,528,347.31	2,093,311.03	39° 59' 42.154 N	109° 22' 58.842 W
2,843.00	18.99	61.78	2,827.06	105.12	171.19	14,528,354.14	2,093,323.02	39° 59' 42.219 N	109° 22' 58.686 W
2,888.00	20.03	61.56	2,869.47	112.25	184.42	14,528,361.51	2,093,336.11	39° 59' 42.290 N	109° 22' 58.516 W
2,934.00	19.87	59.70	2,912.71	119.95	198.10	14,528,369.46	2,093,349.65	39° 59' 42.366 N	109° 22' 58.340 W
2,979.00	19.31	59.41	2,955.11	127.60	211.11	14,528,377.34	2,093,362.51	39° 59' 42.441 N	109° 22' 58.173 W
3,024.00	19.19	60.53	2,997.59	135.02	223.95	14,528,384.99	2,093,375.22	39° 59' 42.515 N	109° 22' 58.008 W
3,070.00	18.56	60.66	3,041.12	142.33	236.91	14,528,392.53	2,093,388.05	39° 59' 42.587 N	109° 22' 57.842 W
3,115.00	17.25	60.03	3,083.94	149.17	248.94	14,528,399.59	2,093,399.95	39° 59' 42.654 N	109° 22' 57.687 W
3,160.00	16.94	59.78	3,126.95	155.80	260.38	14,528,406.43	2,093,411.27	39° 59' 42.720 N	109° 22' 57.540 W
3,206.00	17.00	61.78	3,170.95	162.35	272.10	14,528,413.20	2,093,422.87	39° 59' 42.785 N	109° 22' 57.389 W
3,251.00	17.00	63.41	3,213.98	168.41	283.78	14,528,419.46	2,093,434.43	39° 59' 42.845 N	109° 22' 57.239 W
3,296.00	16.25	63.53	3,257.10	174.16	295.30	14,528,425.42	2,093,445.85	39° 59' 42.901 N	109° 22' 57.091 W
3,342.00	16.88	61.28	3,301.19	180.24	306.91	14,528,431.71	2,093,457.35	39° 59' 42.961 N	109° 22' 56.942 W
3,387.00	17.94	59.66	3,344.13	186.88	318.63	14,528,438.56	2,093,468.94	39° 59' 43.027 N	109° 22' 56.791 W
3,432.00	18.31	59.03	3,386.90	194.02	330.67	14,528,445.92	2,093,480.85	39° 59' 43.098 N	109° 22' 56.637 W
3,477.00	18.94	57.16	3,429.54	201.62	342.86	14,528,453.73	2,093,492.91	39° 59' 43.173 N	109° 22' 56.480 W
3,523.00	18.81	54.41	3,473.07	209.98	355.17	14,528,462.32	2,093,505.06	39° 59' 43.255 N	109° 22' 56.322 W
3,568.00	18.63	54.16	3,515.69	218.41	366.89	14,528,470.96	2,093,516.63	39° 59' 43.339 N	109° 22' 56.171 W
3,613.00	17.75	54.66	3,558.44	226.59	378.32	14,528,479.34	2,093,527.90	39° 59' 43.420 N	109° 22' 56.024 W
3,659.00	17.44	56.66	3,602.29	234.43	389.79	14,528,487.40	2,093,539.24	39° 59' 43.497 N	109° 22' 55.877 W
3,704.00	16.75	60.91	3,645.30	241.29	401.10	14,528,494.46	2,093,550.41	39° 59' 43.565 N	109° 22' 55.732 W
3,749.00	16.63	62.28	3,688.41	247.44	412.46	14,528,500.81	2,093,561.66	39° 59' 43.626 N	109° 22' 55.586 W
3,794.00	17.19	62.28	3,731.46	253.53	424.05	14,528,507.11	2,093,573.14	39° 59' 43.686 N	109° 22' 55.437 W
3,840.00	18.94	61.41	3,775.19	260.26	436.62	14,528,514.07	2,093,585.59	39° 59' 43.752 N	109° 22' 55.275 W
3,885.00	19.31	57.41	3,817.71	267.76	449.30	14,528,521.80	2,093,598.13	39° 59' 43.827 N	109° 22' 55.112 W
3,930.00	19.19	53.66	3,860.19	276.16	461.53	14,528,530.41	2,093,610.20	39° 59' 43.910 N	109° 22' 54.955 W
3,976.00	18.38	52.03	3,903.74	285.10	473.34	14,528,539.57	2,093,621.85	39° 59' 43.998 N	109° 22' 54.803 W
4,021.00	19.69	54.78	3,946.28	293.83	485.13	14,528,548.52	2,093,633.47	39° 59' 44.084 N	109° 22' 54.652 W
4,066.00	19.81	57.78	3,988.64	302.27	497.77	14,528,557.18	2,093,645.96	39° 59' 44.168 N	109° 22' 54.489 W

**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
**Site:** NBU 922-36G PAD  
**Well:** NBU 922-36H2AS  
**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,111.00	20.00	61.53	4,030.95	310.01	510.99	14,528,565.16	2,093,659.04	39° 59' 44.244 N	109° 22' 54.320 W
4,157.00	19.56	63.53	4,074.24	317.19	524.79	14,528,572.59	2,093,672.71	39° 59' 44.315 N	109° 22' 54.142 W
4,202.00	18.81	67.03	4,116.74	323.38	538.22	14,528,579.02	2,093,686.02	39° 59' 44.376 N	109° 22' 53.970 W
4,247.00	17.94	67.28	4,159.44	328.89	551.29	14,528,584.76	2,093,698.99	39° 59' 44.431 N	109° 22' 53.802 W
4,293.00	18.25	68.66	4,203.17	334.24	564.53	14,528,590.36	2,093,712.14	39° 59' 44.484 N	109° 22' 53.631 W
4,338.00	18.44	68.78	4,245.88	339.38	577.73	14,528,595.74	2,093,725.24	39° 59' 44.534 N	109° 22' 53.462 W
4,383.00	18.69	66.41	4,288.54	344.85	590.97	14,528,601.44	2,093,738.38	39° 59' 44.588 N	109° 22' 53.292 W
4,428.00	18.38	63.03	4,331.21	350.95	603.90	14,528,607.78	2,093,751.20	39° 59' 44.649 N	109° 22' 53.125 W
4,474.00	19.06	60.78	4,374.77	357.90	616.92	14,528,614.97	2,093,764.09	39° 59' 44.718 N	109° 22' 52.958 W
4,519.00	19.50	62.16	4,417.25	365.00	629.98	14,528,622.30	2,093,777.01	39° 59' 44.788 N	109° 22' 52.790 W
4,564.00	18.44	62.16	4,459.81	371.83	642.91	14,528,629.36	2,093,789.82	39° 59' 44.855 N	109° 22' 52.624 W
4,610.00	16.44	61.03	4,503.69	378.38	655.04	14,528,636.13	2,093,801.83	39° 59' 44.920 N	109° 22' 52.468 W
4,655.00	15.75	60.91	4,546.93	384.43	665.95	14,528,642.38	2,093,812.63	39° 59' 44.980 N	109° 22' 52.328 W
4,700.00	15.31	61.03	4,590.28	390.28	676.48	14,528,648.42	2,093,823.05	39° 59' 45.038 N	109° 22' 52.193 W
4,746.00	14.63	60.53	4,634.72	396.08	686.86	14,528,654.41	2,093,833.32	39° 59' 45.095 N	109° 22' 52.059 W
4,791.00	13.88	60.03	4,678.34	401.57	696.48	14,528,660.07	2,093,842.84	39° 59' 45.149 N	109° 22' 51.936 W
4,836.00	13.44	60.53	4,722.06	406.84	705.71	14,528,665.51	2,093,851.97	39° 59' 45.201 N	109° 22' 51.817 W
4,882.00	12.88	60.66	4,766.85	411.98	714.83	14,528,670.81	2,093,861.00	39° 59' 45.252 N	109° 22' 51.700 W
4,927.00	12.88	62.78	4,810.72	416.74	723.66	14,528,675.72	2,093,869.74	39° 59' 45.299 N	109° 22' 51.586 W
4,972.00	12.19	63.28	4,854.65	421.17	732.37	14,528,680.31	2,093,878.37	39° 59' 45.343 N	109° 22' 51.475 W
5,018.00	10.00	56.66	4,899.79	425.55	740.04	14,528,684.83	2,093,885.96	39° 59' 45.386 N	109° 22' 51.376 W
5,063.00	9.38	51.28	4,944.15	429.99	746.17	14,528,689.38	2,093,892.01	39° 59' 45.430 N	109° 22' 51.297 W
5,108.00	9.06	52.66	4,988.57	434.43	751.85	14,528,693.93	2,093,897.60	39° 59' 45.474 N	109° 22' 51.224 W
5,153.00	8.25	53.91	5,033.05	438.48	757.27	14,528,698.08	2,093,902.95	39° 59' 45.514 N	109° 22' 51.155 W
5,199.00	7.31	53.41	5,078.63	442.17	762.29	14,528,701.85	2,093,907.90	39° 59' 45.550 N	109° 22' 51.090 W
5,244.00	7.25	53.53	5,123.27	445.56	766.87	14,528,705.33	2,093,912.42	39° 59' 45.584 N	109° 22' 51.031 W
5,289.00	6.56	53.66	5,167.94	448.77	771.23	14,528,708.62	2,093,916.72	39° 59' 45.616 N	109° 22' 50.975 W
5,334.00	5.88	50.91	5,212.67	451.75	775.09	14,528,711.67	2,093,920.52	39° 59' 45.645 N	109° 22' 50.926 W
5,380.00	5.31	52.66	5,258.46	454.53	778.61	14,528,714.51	2,093,923.99	39° 59' 45.673 N	109° 22' 50.880 W
5,425.00	4.81	48.28	5,303.28	457.05	781.67	14,528,717.08	2,093,927.01	39° 59' 45.697 N	109° 22' 50.841 W
5,516.00	4.38	53.53	5,393.99	461.65	787.31	14,528,721.79	2,093,932.57	39° 59' 45.743 N	109° 22' 50.769 W
5,606.00	3.75	55.78	5,483.76	465.35	792.51	14,528,725.58	2,093,937.70	39° 59' 45.779 N	109° 22' 50.702 W
5,697.00	3.31	64.41	5,574.59	468.16	797.34	14,528,728.47	2,093,942.48	39° 59' 45.807 N	109° 22' 50.640 W
5,787.00	1.56	74.03	5,664.50	469.62	800.86	14,528,730.00	2,093,945.97	39° 59' 45.822 N	109° 22' 50.594 W
5,878.00	0.31	219.91	5,755.49	469.77	801.89	14,528,730.17	2,093,947.00	39° 59' 45.823 N	109° 22' 50.581 W
5,968.00	0.63	208.03	5,845.49	469.15	801.51	14,528,729.54	2,093,946.62	39° 59' 45.817 N	109° 22' 50.586 W
6,059.00	0.50	240.70	5,936.49	468.51	800.92	14,528,728.89	2,093,946.05	39° 59' 45.811 N	109° 22' 50.594 W
6,150.00	0.50	230.91	6,027.48	468.06	800.27	14,528,728.43	2,093,945.41	39° 59' 45.806 N	109° 22' 50.602 W
6,240.00	0.56	200.03	6,117.48	467.40	799.81	14,528,727.77	2,093,944.96	39° 59' 45.800 N	109° 22' 50.608 W
6,331.00	1.25	343.41	6,208.47	467.94	799.38	14,528,728.29	2,093,944.52	39° 59' 45.805 N	109° 22' 50.613 W
6,421.00	0.75	350.66	6,298.46	469.46	799.00	14,528,729.81	2,093,944.11	39° 59' 45.820 N	109° 22' 50.618 W
6,512.00	0.99	61.12	6,389.45	470.43	799.59	14,528,730.78	2,093,944.69	39° 59' 45.830 N	109° 22' 50.611 W
6,602.00	0.44	78.16	6,479.44	470.87	800.61	14,528,731.25	2,093,945.70	39° 59' 45.834 N	109° 22' 50.598 W
6,693.00	1.44	344.41	6,570.43	472.05	800.65	14,528,732.42	2,093,945.71	39° 59' 45.846 N	109° 22' 50.597 W
6,784.00	1.13	300.16	6,661.41	473.60	799.56	14,528,733.95	2,093,944.60	39° 59' 45.861 N	109° 22' 50.611 W
6,874.00	1.44	293.16	6,751.39	474.49	797.76	14,528,734.81	2,093,942.78	39° 59' 45.870 N	109° 22' 50.634 W
6,965.00	0.88	286.90	6,842.37	475.14	796.04	14,528,735.43	2,093,941.05	39° 59' 45.876 N	109° 22' 50.656 W
7,055.00	0.44	241.16	6,932.37	475.18	795.07	14,528,735.45	2,093,940.08	39° 59' 45.877 N	109° 22' 50.669 W
7,146.00	0.69	206.16	7,023.36	474.52	794.53	14,528,734.78	2,093,939.55	39° 59' 45.870 N	109° 22' 50.676 W
7,237.00	0.69	184.28	7,114.36	473.48	794.24	14,528,733.74	2,093,939.28	39° 59' 45.860 N	109° 22' 50.679 W
7,327.00	1.44	160.91	7,204.34	471.87	794.57	14,528,732.13	2,093,939.64	39° 59' 45.844 N	109° 22' 50.675 W
7,418.00	1.94	130.41	7,295.30	469.79	796.12	14,528,730.08	2,093,941.23	39° 59' 45.823 N	109° 22' 50.655 W
7,508.00	0.44	81.16	7,385.28	468.86	797.62	14,528,729.18	2,093,942.74	39° 59' 45.814 N	109° 22' 50.636 W
7,599.00	0.63	53.03	7,476.28	469.21	798.37	14,528,729.54	2,093,943.48	39° 59' 45.818 N	109° 22' 50.626 W
7,689.00	0.94	100.78	7,566.27	469.37	799.49	14,528,729.72	2,093,944.60	39° 59' 45.819 N	109° 22' 50.612 W

**Company:** ANADARKO PETROLEUM CORP.  
**Project:** UINTAH COUNTY, UTAH (nad 27)  
**Site:** NBU 922-36G PAD  
**Well:** NBU 922-36H2AS  
**Wellbore:** NBU 922-36H2AS  
**Design:** NBU 922-36H2AS ACTUAL

**Local Co-ordinate Reference:** Well NBU 922-36H2AS  
**TVD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**MD Reference:** KB @ 4974.00ft (KB PROD RIG)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 2003.21 Single User Db

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
7,780.00	0.69	116.91	7,657.26	468.98	800.71	14,528,729.36	2,093,945.83	39° 59' 45.815 N	109° 22' 50.596 W
7,871.00	0.56	119.16	7,748.25	468.52	801.59	14,528,728.91	2,093,946.71	39° 59' 45.811 N	109° 22' 50.585 W
7,981.00	0.69	119.78	7,858.25	467.93	802.63	14,528,728.34	2,093,947.77	39° 59' 45.805 N	109° 22' 50.572 W
8,052.00	0.75	123.91	7,929.24	467.45	803.39	14,528,727.88	2,093,948.53	39° 59' 45.800 N	109° 22' 50.562 W
8,142.00	0.50	128.21	8,019.24	466.88	804.18	14,528,727.32	2,093,949.34	39° 59' 45.795 N	109° 22' 50.552 W
8,233.00	0.94	140.53	8,110.23	466.06	804.97	14,528,726.52	2,093,950.14	39° 59' 45.786 N	109° 22' 50.542 W
8,323.00	1.44	124.28	8,200.21	464.85	806.37	14,528,725.33	2,093,951.57	39° 59' 45.775 N	109° 22' 50.524 W
8,412.00	1.49	111.63	8,289.18	463.80	808.37	14,528,724.31	2,093,953.59	39° 59' 45.764 N	109° 22' 50.498 W
8,503.00	1.66	115.63	8,380.15	462.79	810.66	14,528,723.35	2,093,955.89	39° 59' 45.754 N	109° 22' 50.468 W
8,593.00	2.07	123.84	8,470.10	461.32	813.19	14,528,721.93	2,093,958.44	39° 59' 45.740 N	109° 22' 50.436 W
8,685.00	2.07	122.53	8,562.04	459.50	815.97	14,528,720.16	2,093,961.26	39° 59' 45.722 N	109° 22' 50.400 W
8,774.00	2.13	156.89	8,650.98	457.12	817.97	14,528,717.81	2,093,963.31	39° 59' 45.698 N	109° 22' 50.374 W
8,830.00	2.09	160.69	8,706.94	455.20	818.72	14,528,715.90	2,093,964.09	39° 59' 45.679 N	109° 22' 50.365 W
<b>EXT. TD</b>									
8,884.00	2.09	160.69	8,760.91	453.34	819.37	14,528,714.06	2,093,964.77	39° 59' 45.661 N	109° 22' 50.357 W

**Survey Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
8,884.00	8,760.91	453.34	819.37	EXT. TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217 Phone Number: (720) 929-6100

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750391	NBU 922-36H2DS		SWNE	36	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	7/31/2009			<u>8/13/09</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 07/31/2009 AT 08:30 HRS. <u>BHL = SENE</u>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750392	NBU 922-36H2AS		SWNE	36	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	7/31/2009			<u>8/13/09</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 07/31/2009 AT 10:30 HRS. <u>BHL = SENE</u>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304750393	NBU 922-36G1T		SWNE	36	9S	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	7/31/2009			<u>8/13/09</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 07/31/2009 AT 12:45 HRS.							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

ANDY LYTLE

Name (Please Print)

Signature

REGULATORY ANALYST

Title

8/3/2009

Date

**RECEIVED**

AUG 03 2009

DIV. OF OIL, GAS & MINING

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> ML 22650
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 922-36H2AS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1829 FNL 1501 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNE Section: 36 Township: 09.0S Range: 22.0E Meridian: S		<b>9. API NUMBER:</b> 43047503920000
<b>10. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>COUNTY:</b> UINTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		<b>STATE:</b> UTAH
<b>TYPE OF SUBMISSION</b>  <input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 8/21/2015  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<b>TYPE OF ACTION</b>  <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION         </div> </div> <div style="text-align: right; margin-top: 10px;">         OTHER: <span style="border: 1px solid black; padding: 2px;">TUBING FAILURE</span> </div>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> A WORKOVER FOR TUBING FAILURE HAS BEEN COMPLETED ON THE NBU 922-36H2AS, SEE THE ATTACHED OPERATIONS SUMMARY REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining <b>FOR RECORD ONLY</b> August 26, 2015		
<b>NAME (PLEASE PRINT)</b> Doreen Green	<b>PHONE NUMBER</b> 435 781-9758	<b>TITLE</b> Regulatory Analyst II
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/26/2015	

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 922-36H2AS [YELLOW]				Spud Conductor: 7/31/2009				Spud date: 8/3/2009				
Project: UTAH-UINTAH				Site: NBU 922-36G PAD					Rig name no.: MILES-GRAY 1/1			
Event: WELL WORK EXPENSE				Start date: 8/13/2015					End date: 8/19/2015			
Active datum: RKB @4,974.00usft (above Mean Sea Level)				UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0								
Date	Time Start-End		Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation			
8/13/2015	7:00	- 10:30	3.50	RDMO	30	H	P		HSM,JSA RDMO TO NBU 922-36H2AS			
	10:30	- 14:30	4.00	MIRU	30	A	P		MIRU,SICP=100PSI SITP 50PSI, CNTRL WELL, NDWH PU ON STRING, IT WAS FREE. NUBPOE AND TEST.RU TBG EQUIP & FLOOR. PU AND TIH W 15JTS 2-3/8" J-55 TBG. TAGGED FILL @ BTTM PERF @ 8688'. LD 1JT STAND BACK 14 JTS.			
	14:30	- 19:30	5.00	MAINT	31	I	P		RU SCANTECH. SCAN OOH WITH 261 JTS 2-3/8" 4.7# J-55 TBG. INSPECTION WENT AS FOLLOWS. YELLOW BAND = 51JTS BLUE BAND = 88 JTS RED BAND = 122 JTS THERE WAS SCALE PLUGGED OFF TBG AT JOINT 194 (APPROX. 6124') AND CONTINUED TO EOT @ 8212'. AT JNT 195 THERE BEGAN A LIGHT EXTERNAL SCALE THAT WENT TO EOT AS WELL. HOLES IN TBG WERE FOUND IN JTS 195 (6155'), 204 (6439), 205 (6470') 210 (6628') 216 (6817') AND 232 (7321'). SWIFN			
8/14/2015	7:00	- 7:15	0.25	MAINT	48		P		HSM, JSA			
	7:15	- 12:00	4.75	MAINT	31	I	P		PU XN NIPPLE AND TIH WITH 211 JTS 2-3/8" TBG EOT @ 6702'. SWIFWE			
8/17/2015	7:00	- 15:00	8.00	MAINT	30		P		STANDBY. W/O N2 UNIT			
8/18/2015	7:00	- 7:15	0.25	MAINT	48		P		SAFETY = JSA.			
	7:15	- 8:00	0.75	MAINT	30	E	P		SITP= 325#. SICP= 600#. BLOW DOWN CSNG TO FLOWBACK TANK. CNTRL TBNG W/ 10BBLS TMAC.			
	8:00	- 8:50	0.83	MAINT	31	I	P		CONT P/U & RIH W/ 3-7/8" MILL, BIT SUB & 2-3/8" J-55 TBNG. T/U ON SCALE @8277' W/ 261JTS +BHA. R/U POWER SWIVEL. INSTALL TSF.			
	8:50	- 12:10	3.33	MAINT	31	H	P		MIRU N2 FOAM UNIT. BREAK CIRC IN 3HRS 20 MIN.			
	12:10	- 15:40	3.50	MAINT	44	D	P		D/O HEAVY SCALE F- 8277'-8315', 8412'-8476', 8585'-8687' AND FALL THRU TO 8750.53' W/ 275JTS TBG + BHA. DEEP ENOUGH (BOTTOM PERF @8688'). CIRC WELL CLEAN FOR 1HR. CNTRL TBNG W/ 15BBLS TMAC. R/D POWER SWIVEL.			
	15:40	- 17:00	1.33	MAINT	31	I	P		POOH WHILE L/D17JTS EXCESS TBNG. POOH WHILE STD BACK 48JTS TBNG. SWIFN. SDFN. LOCK RAMS.			
8/19/2015	7:00	- 7:15	0.25	MAINT	48		P		SAFETY = JSA.			

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 922-36H2AS [YELLOW]				Spud Conductor: 7/31/2009				Spud date: 8/3/2009			
Project: UTAH-UINTAH				Site: NBU 922-36G PAD				Rig name no.: MILES-GRAY 1/1			
Event: WELL WORK EXPENSE				Start date: 8/13/2015				End date: 8/19/2015			
Active datum: RKB @4,974.00usft (above Mean Sea Level)				UWI: 0/9/S/22/E/36/0/SWNE/26/PM/N/1,829.00/E/0/1,501.00/0/0							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation			
	7:15 - 14:30	7.25	MAINT	31	I	P		SICP & SITP= 400#. BLOW DOWN CSG TO FLOWBACK TANK. CNTRL TBG W/ 15BBLS TMAC. POOH WHIL STND BACK REMAINING 210JTS 2-3/8" J-55 TBNG. L/D MILL & BIT SUB. P/U & RIH W/ NEW 1.875" XN-NOTCH COMBO NIPPLE + 258JTS 2-3/8" J-55 TBNG. BROACH ALL TBNG GOOD WHILE TIH W/ 1.910" BROACH. CSG BLOWING VERY STRONG, SO LUBE IN TBNG HANGER. LAND TBNG. R/D FLOOR & TBG EQUIP. NDBOP. NUWH. PUMP 10GAL NALCO COMBO CHEM DOWN CSNG W/ RIG PUMP& CHASE W/ 1BBL TMAC TO CLEAR LINES. SWI.\n\nPRODUCTION TBNG LANDED AS FOLLOWS:\n\nKB= 13.00\nHANGER= .83\n258JTS 2-3/8" J-55 Y-BND TBG= 8187.56\n1.875" XN-NOTCH NIPPLE= 1.05\nEOT @ 8202.44\n\nNOTE: CNTRL TBNG AS NEEDED W/ TMAC. TWLTR= 30BBLS			
	14:30 - 17:00	2.50	MAINT	30	C	P		RACK OUT ALL EQUIP. RDMOL. ROAD RIG TO NBU 922-36B PAD. SPOT IN RIG. SDFN.			
8/20/2015	7:00 - 11:00	4.00	PROD	42		P		SWABBING FL 4160			
8/21/2015	7:00 - 11:00	4.00	MAINT	42		P		FLUID LEVEL 5300'			